PATHFINDER INFOGRIPE

DATA-DRIVEN PROCESS MAPPING FOR THE DEVELOPMENT OF RESEARCH SOLUTIONS AND CAPACITIES

INFO GRIPE

THE GLOBAL HEALTH NETWORK
LATIN AMERICA AND THE CARIBBEAN

FIOCRUZ

MINISTÉRIO DA SAÚDE

GOVERNO DO BRASIL
DO LADO DO POVO BRASILEIRO

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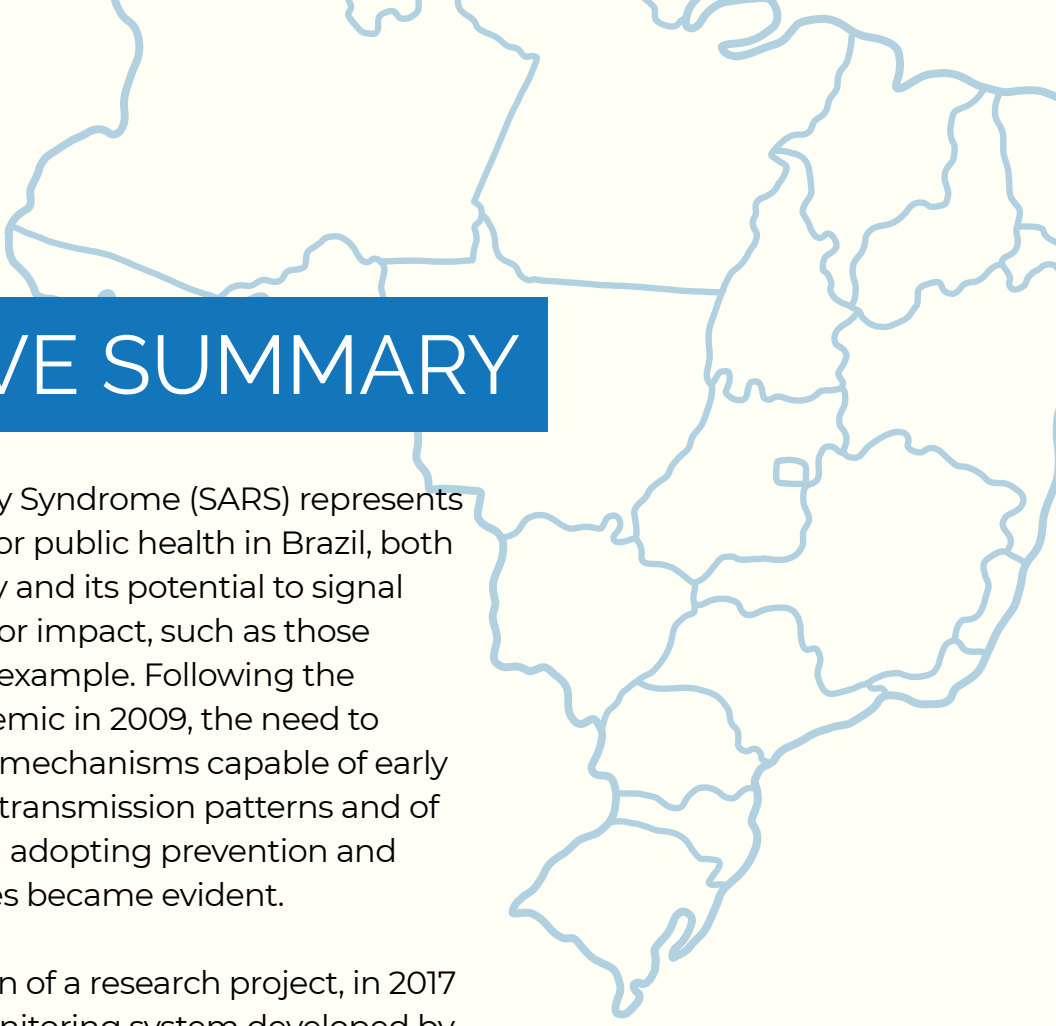

EXECUTIVE SUMMARY

Severe Acute Respiratory Syndrome (SARS) represents a significant challenge for public health in Brazil, both due to its clinical severity and its potential to signal viral outbreaks with major impact, such as those caused by influenza, for example. Following the influenza A (H1N1) pandemic in 2009, the need to strengthen surveillance mechanisms capable of early detection of changes in transmission patterns and of supporting managers in adopting prevention and rapid-response measures became evident.

Building on the evolution of a research project, in 2017 **InfoGripe** became a monitoring system developed by the Oswaldo Cruz Foundation (Fiocruz) to track reported SARS cases across Brazil and provide early warning signals. The initiative supports health surveillance services in identifying priority locations for action, preparedness, and response to public health events.

The project combines advanced statistical analyses with mathematical models applied to epidemiological and climatic data. It uses a semi-automated pipeline (a standardized set of steps) for data collection, harmonization, and analysis, enabling the weekly publication of bulletins containing epidemiological indicators, operational metrics, and analyses by age group, clinical progression, and laboratory outputs.

Throughout its trajectory, InfoGripe has incorporated methodologies such as the Moving Epidemic Method (MEM) and nowcasting (near real-time forecasting) to correct reporting delays and generate more accurate real-time estimates.

During the COVID-19 pandemic, the system gained broad visibility by identifying early changes in age profiles and sharp increases in hospitalizations due to SARS, consolidating itself as a national reference in risk communication related to the syndrome.

In addition to the technical and scientific outputs published over the years, InfoGripe also stands out for the way it structured its social communication processes and stakeholder engagement. Continuous dialogue among the project and managers, the media, and civil society was essential to transforming complex data into accessible, actionable information, especially during the COVID-19 pandemic. This approach enabled more agile decision-making across different levels of the health system. Throughout its history, InfoGripe demonstrates that communication with society and partners is a strategic axis for strengthening public health responses.

Considering the scientific and public health relevance of InfoGripe and the accumulation of learning generated over its trajectory, the Pathfinder InfoGripe study was conducted in collaboration with the Fiocruz team of The Global Health Network Latin America and the Caribbean (TGHN LAC). Based on the **Pathfinder** methodology — a collaborative approach aimed at the systematic mapping of health research processes — the study documented stages, tools, and actors involved, enabling the identification of challenges, solutions, and good practices within the dimensions of "Outputs and Impact" and "Stakeholder Engagement."

This report presents the main mapped processes, as well as lessons learned, innovations, and developed materials, with the objective of valuing consolidated practices, proposing improvements, and fostering the sharing of lessons that may inspire other teams and strengthen national and international collaborations.

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INFOGRIPE:

OVER A DECADE OF SURVEILLANCE

Origins and motivation

InfoGripe began as a research project in 2014 and, as of 2017, became a system aimed at monitoring Severe Acute Respiratory Syndrome (SARS) in Brazil and its Federative Units, with the objective of providing early warning signals to managers, health professionals, and society at large.

Created by researchers from the Scientific Computing Program (PROCC), of the Oswaldo Cruz Foundation (Fiocruz) and from the School of Applied Mathematics of the Getulio Vargas Foundation (FGV, EMAp), in Brazil, the initiative was motivated by the experience acquired by the Influenza Working Group (GT-Gripe) of the Brazilian Ministry of Health (MoH) following the influenza A (H1N1) pandemic of 2009.

InfoGripe consolidated itself as a strategic tool at the national level to support public health decision-making through weekly bulletins containing quantitative analyses of transmission patterns.

The project combines advanced statistical analyses with mathematical models applied to epidemiological and climatic data.

Methodological enhancement

The system uses a semi-automated pipeline for data collection, harmonization, and analysis, which enables the weekly publication of bulletins with epidemiological indicators, operational metrics, and analyses by age group, clinical progression, and laboratory outputs.

InfoGripe initially focused on Influenza-like Illness (ILI), based on the expectation of detecting epidemiological changes before they were reflected in hospitalizations.

However, it soon became clear that the quality and completeness of SARS data allowed for more reliable analyses at the state level.

Pipeline

Standardized set of steps.

Thus, methodological advances were incorporated, with emphasis on two main axes:

- Use of the Moving Epidemic Method (MEM) and Epidemic Threshold: the project incorporated MEM, used by the European Centre for Disease Control, to define activity thresholds and endemic channels (Vega et al., 2012). The Brazilian adaptation took into account the reality of national data and sought appropriate parameterizations in collaboration with the technical team of the Ministry of Health.
- Nowcasting (near real-time forecasting): to correct data entry delays and improve the timely detection of outbreaks, a methodology inspired by actuarial sciences was adopted. This process made it possible to generate real-time estimates regardless of the speed at which the system is fed; that is, it estimates more accurately the most recent SARS cases by predicting cases that have occurred but have not yet been reported to the Ministry of Health (Bastos et al., 2017; Bastos et al., 2019).

These elements were integrated into web dashboards that, in addition to epidemiological indicators, present operational metrics such as time between symptom onset and hospitalization, time to laboratory output, and timeliness of data entry.

The first version of the website was launched in 2017, internally validated by the Ministry of Health, and made available to the national surveillance network. However, initial use was limited, with barriers related to technical understanding and the absence of in-person training. Starting in 2018, the production of epidemiological bulletins began, and in the following year, 2019, InfoGripe was incorporated into the seasonal influenza contingency plan, with the combined use of epidemic threshold methodologies, endemic channels using MEM, and nowcasting to correct reporting delays. During this period, more interactive maps were developed to allow visualization of data classified by thresholds or by alert levels defined in the national contingency plan.

Also in 2019, the methodological article on nowcasting was published in the scientific journal Statistics in Medicine, marking the peer-reviewed validation of the work (Bastos et al., 2019).

Responses to the pandemic and health communication

In March 2020, InfoGripe identified early changes in the age profile and a sudden increase in hospitalizations due to SARS, triggering alerts and gaining wide visibility in the media (Bastos et al., 2020).

The bulletin was restructured to enable more accessible communication, with support from the Fiocruz Social Communication Coordination Office, and became a reference source for monitoring the COVID-19 pandemic in Brazil.

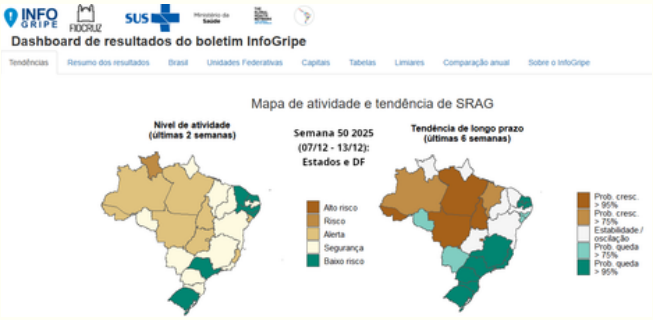
As a output, InfoGripe began to:

- Publish weekly bulletins starting from epidemiological week 8/2020.
- Establish direct integration with the weekly report of the Ministry of Health.
- Serve as a national reference in risk communication, with broad media coverage.
- Incorporate new indicators and analyses, including by age group, clinical progression, and laboratory outputs.

Communication and public impact

For InfoGripe, open communication of the outputs produced is one of the pillars that sustain the relevance and impact of the project. The objective is to facilitate evidence-based decision-making by managers and health professionals, strengthening surveillance at different levels of the health system.

Over the course of a decade, InfoGripe has consolidated itself as a national reference in respiratory syndrome surveillance, combining methodological innovation, transparency, and a commitment to scientific communication in public health.



InfoGripe dashboard page (Dec/2025).

Followed below is a synthesis of the weekly InfoGripe pipeline presented in a vertical green flowchart with seven steps.

Weekly InfoGripe Pipeline

1

Data receipt

Receipt of SARS data reported in the national surveillance system (SIVEP-Gripe) up to the Saturday of the previous week.

2

Verification and cleaning

Removal of duplicates, consistency checks, and completeness verification of records. Ensuring full anonymization prior to analysis. Application of different symptom filters.

3

Analysis and interpretation

Application of statistical models and indicators (SARS activity level and short- and long-term trends). Interpretation of outputs in technical meetings and definition of highlights for the bulletin.

4

Preparation of the bulletins

Drafting and review of the InfoGripe Bulletin (national, state-level, and capital-level analyses). Production of an interpretative summary with the main findings and key messages.

5

Internal discussion and validation

Discussion of outputs by the multidisciplinary team (researchers, fellows, and communication staff). Adjustments to language, charts, and indicators according to technical consensus.

6

Dissemination and communication

Publication of the bulletin and summary in the project repository. Production of complementary materials: videos, posts, and technical notes on methodologies. Simultaneous distribution to managers of the federal, state and municipal health departments, and media professionals.

7

Feedback and improvement

Receipt of feedback from managers, the media, and specialized audiences.
Continuous adjustments to analyses, formats, and tools (interactive dashboard, technical notes, etc.).

PATHFINDER METHODOLOGY

In 2023, InfoGripe and **The Global Health Network América Latina e Caribe (TGHN LAC)** established a partnership. TGHN LAC is one of the regional hubs of The Global Health Network (TGHN), a global community of practice with more than one million members dedicated to strengthening health research.

This partnership represented an opportunity to document and map the stages, processes, methodological tools, and stakeholders involved in InfoDengue, contributing significantly to internal organization, facilitating the identification of bottlenecks and opportunities for improvement, and also sharing lessons learned, thereby strengthening other initiatives through the Pathfinder methodology.

In view of global inequalities regarding where health research takes place, who conducts it, and which populations benefit from its outputs, the Pathfinder methodology was developed to document good practices in data-driven research, strengthen quality standards, and accelerate scientific production in contexts most in need of evidence.

Global Inequality in Health Research

Structural and capacity limitations. Challenges present in research settings.

Mapping of Research Stages – Pathfinder

Recording of metrics, resources, methods, and outputs. Identification of challenges and solutions.

Use of Support Resources

Application of tools and references to guide mapping and outputs.

ACCESSIBILITY
On this page and the next, there is a sequential diagram in the top right-hand corner, with steps arranged vertically and connected by a light blue line.

To this end, Pathfinder offers a set of tools aimed at process mapping, enabling teams to describe the main stages of their workflows so as to ensure data consistency and enable new studies.

This methodology can be applied prospectively, accompanying ongoing research and providing organization at each stage, or retrospectively, in projects that have already been completed, documenting lessons learned, challenges, and solutions, as well as encouraging data reuse (Uppal et al., 2025).

During the mapping process, teams record critical stages and indicators, such as time and resources used, enabling a comprehensive view of the research process. This systematization supports the identification of bottlenecks, the proposal of solutions aligned with best practices, and the documentation of tools, methods, technologies, and governance strategies used. The process also strengthens the capacities of research teams and broadens the circulation of lessons learned, favoring their application in different contexts (Uppal et al., 2025).

Sharing of Processes and Practices

Development of solutions and capacities. Circulation of lessons learned among teams.

Enhancement of Health Research and Team

Quality and elevated standards. Expanded collaboration.

Data Reuse

New research questions and use of evidence.

PATHINDER INFOGRIPE:

STRUCTURING THE MAPPING PROCESS

The **Pathfinder InfoGripe**, developed between July 2024 and December 2025, aimed to trace the stages and processes of the InfoGripe project in order to determine the challenges and successes encountered in the processes of dialogue with health managers and the press, as well as to foster dialogue with potential international partnerships.

Among its specific objectives, the following stood out:

- documenting the process and metrics associated with the project's outputs, impact, and stakeholder engagement;
- determining the tools, methods, approaches, and systems applied to the stages of outputs, impact, and stakeholder engagement within the project;
- describing each challenge encountered and documenting how they were addressed; and
- disseminating the outputs to support other studies in addressing and overcoming similar challenges.

The process began with the development of the **InfoGripe Pathfinder Protocol**, in which the objectives, methodology, expected outputs, and timeline were agreed upon.

This protocol served as a guide for the mapping process, aligned with the needs and interests of the InfoGripe research group and the potential contributions of the partnership with TGHN LAC (Câmara et al., 2024). To support the development of the protocol using the **Pathfinder Planning Matrix**, tool, the Fiocruz TGHN LAC team organized two **workshops**: one with researchers from TGHN LAC member centers (Argentina, Colombia, Honduras, Peru, and the Dominican Republic; August/2024) and another with InfoGripe researchers (September/2024).

Based on the identification of the macro-stages of the InfoGripe life cycle, two were selected for mapping: **"Outputs and Impact"** and **"Stakeholder Engagement"**, from among the set that includes conception and initial planning, methodological development, production and dissemination of outputs, stakeholder engagement, monitoring, and impact evaluation.

The selection of these two stages reflects the need to understand not only scientific production, but also the flows of circulation and appropriation of information, fundamental aspects for supporting managerial decision-making, expanding communication with the press, and strengthening international cooperation in health.

The **Tracker**, the central tool of the Pathfinder methodology, was used to record and map the selected InfoGripe stages. To populate it in an organic manner, qualitative techniques were used, including **document analysis, participant observation, interviews, and discussion groups**. This combination enabled the collection of diverse perceptions and experiences across the study's stages (Araujo et al., 2023). To support the collection of information for filling out the Tracker, the following sources were used:

- Documentary analysis of reports, technical notes, epidemiological bulletins, scientific articles authored or co-authored by project researchers, and repositories such as Fiocruz GitHub.
- Conversations with key individuals involved in the project, guided by a semi-structured script with open-ended responses, conducted both in person and online.

The **conversation guide** covered different aspects related to the project's trajectory, beginning with participants' history of involvement in InfoGripe and descriptions of the activities carried out in planning the publication and dissemination of outputs. It also highlighted the preparation of outputs that go beyond traditional scientific publications, such as bulletins, technical reports, and supporting materials.

The sharing of outputs generated throughout the project was also addressed, including programming code, interactive dashboards, training activities, and dissemination resources. Another important point concerned the analysis of the time elapsed between the production of initial outputs and the availability of consolidated evidence.

The guide further included planning for interactions and stakeholder involvement at different stages, as well as the active participation of diverse audiences—citizens, health professionals, and policymakers—to better understand the challenges and opportunities that guided the development and practical application of InfoGripe.

Finally, it addressed the monitoring of changes in the use of health outputs and the forms of stakeholder engagement in light of the impacts produced.

This qualitative approach was essential to understanding the contexts, meanings, and challenges of InfoGripe, identifying barriers and solutions that would not be captured solely by numerical indicators. The combination of methods strengthened the validity of the findings and enabled a more comprehensive view of the processes, documenting obstacles, successes, and lessons learned, with a view toward replicability (Minayo; Assis; Souza, 2005).

Throughout the mapping process, exchange and follow-up sessions were held with various centers and actors.

These sessions reflect the living nature of the methodology, which seeks to share solutions, promote collective learning, and strengthen collaborations.

Participants in these meetings included members of the InfoGripe teams, the Fiocruz TGHN LAC team, and InfoDengue—the dengue and chikungunya monitoring system in Brazil, which was also mapped using Pathfinder.

There was also continuous communication with TGHN LAC research centers in Latin America and the Caribbean (Argentina, Colombia, Honduras, Peru, and the Dominican Republic), as well as with the Global Health Data Science Hub of TGHN composed of partners from TGHN Africa, Asia, and the University of Oxford.

Within these spaces, the exchange of experiences, challenges, and lessons learned in health research enabled the ongoing evaluation and adaptation of the process, the proposal of new solutions to the challenges identified in InfoGripe, as well as the dissemination of the project itself, expanding opportunities for future collaborations.

FROM MAPPING TO LESSONS

THE INFOGRIPE EXPERIENCE

The mapping of the InfoGripe project using the Pathfinder methodology enabled systematic identification of the processes, products, and learnings generated throughout its trajectory. This mapping highlighted how the project articulated scientific production, communication with diverse audiences, and open science practices, while also strengthening dialogue with institutional and social stakeholders.

Below are presented the main contexts and outputs mapped within the categories “Outputs and Impact of InfoGripe” and “Stakeholder Engagement in InfoGripe”, which demonstrate the project’s impact and relevance across multiple dimensions: academic, technical, communicational, and monitoring-related.

1. Scientific preparation and publication:

- Publication of the nowcasting article (*pre-print* em 2017 and *peer-reviewed* em 2019).
- R package for nowcasting *(nowcaster)*.
- Participation in local, national, and international conferences and preparation of technical abstracts.
- Doctoral theses and master’s dissertations by graduate students.

2. Production of outputs for stakeholders:

- Weekly epidemiological bulletins and summaries adapted for the general public, published on GitHub.
- Short videos for social media with key outputs and weekly updates on Youtube da Fiocruz.
- Technical notes detailing the InfoGripe methodology (e.g., new thresholds, February 2025), available on GitHub and Arca.

3. Adoption of open science since the outset of the project:

- Code and methods published and made freely available on GitHub.
- Data and scripts available for reproduction and adaptation by any interested individual or organization.
- Continuous assessment and adaptation of code and methods by the project's research team.

4. Stakeholder engagement:

- Ongoing contact with the Ministry of Health, including synchronized publication of epidemiological bulletins.
- WhatsApp groups with SUS technicians at different levels of operation, as well as a group with journalists and communicators.
- Interviews offered to media outlets of all sizes, dissemination of outputs on social media, and participation in technical events.

5. Dissemination and communication:

- Coordinated actions with the Fiocruz press office.
- National mailing list of journalists and communicators.
- Differentiated strategies for national and regional media outlets, addressing specific demands in each context.

6. Monitoring and impact evaluation:

- Weekly situation rooms.
- Continuous feedback on the activities carried out by the research group.
- Monthly media metrics reports produced within Fiocruz's communication framework.

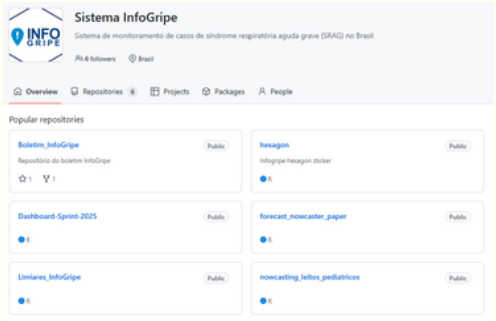
The Pathfinder InfoGripe produced a multifaceted portrait of the project's experience, offering lessons learned and evidence that could guide and inspire future health studies.

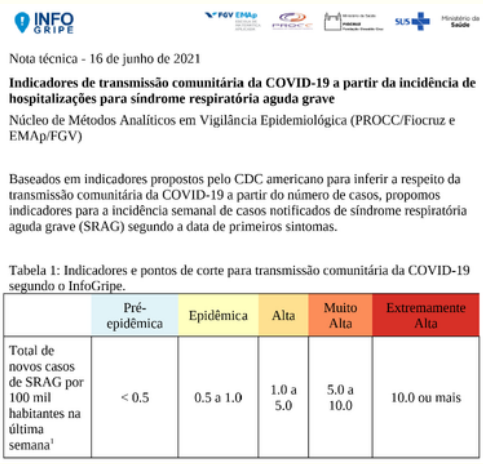
OUTPUTS AND IMPACT

InfoGripe systematically consolidates and analyzes weekly SARS data, interprets them, and disseminates them to support the Ministry of Health (MoH), State Health Departments, health professionals, and civil society in decision-making and addressing the epidemiological scenario. SARS data consolidated through the immediately preceding week are analyzed following a quality control routine that includes removing duplicates and verifying data consistency and completeness. All identifying information is removed prior to analysis.

On a weekly basis, a report is produced containing analyses of SARS dynamics in Brazil, across the Federative Units and in the country's capitals. The InfoGripe bulletin is made available in the project repository, together with a summary presenting the main outputs and their interpretations. Videos highlighting the key findings of the bulletin are shared and stored in InfoGripe playlist on Fiocruz's official YouTube channel.

The project also produces, whenever necessary, supporting documents such as Technical Notes, whose objective is to present and explain specific methodologies employed. For example, InfoGripe uses two indicators that were incorporated after extensive internal discussion and testing.





Nota técnica - 16 de junho de 2021

Indicadores de transmissão comunitária da COVID-19 a partir da incidência de hospitalizações para síndrome respiratória aguda grave

Núcleo de Métodos Analíticos em Vigilância Epidemiológica (PROCC/Fiocruz e EMAp/FGV)

Baseados em indicadores propostos pelo CDC americano para inferir a respeito da transmissão comunitária da COVID-19 a partir do número de casos, propomos indicadores para a incidência semanal de casos notificados de síndrome respiratória aguda grave (SRAG) segundo a data de primeiros sintomas.

Tabela 1: Indicadores e pontos de corte para transmissão comunitária da COVID-19 segundo o InfoGripe.

	Pré-epidêmica	Epidêmica	Alta	Muito Alta	Extremamente Alta
Total de novos casos de SRAG por 100 mil habitantes na última semana[1]	< 0.5	0.5 a 1.0	1.0 a 5.0	5.0 a 10.0	10.0 ou mais

InfoGripe Outputs
(reference in the text and access by clicking on the image).

These two indicators, SARS activity level and short- and long-term trends, were explained in detail in technical notes made available in the project repository and on other online platforms.

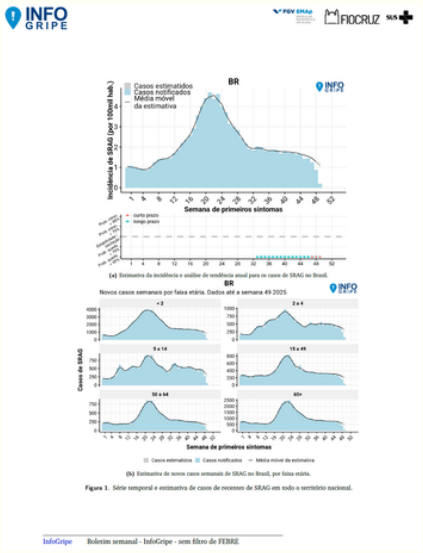
The publication and dissemination of InfoGripe outputs are weekly processes that rely on a large team, including researchers, fellows, and social communication professionals.

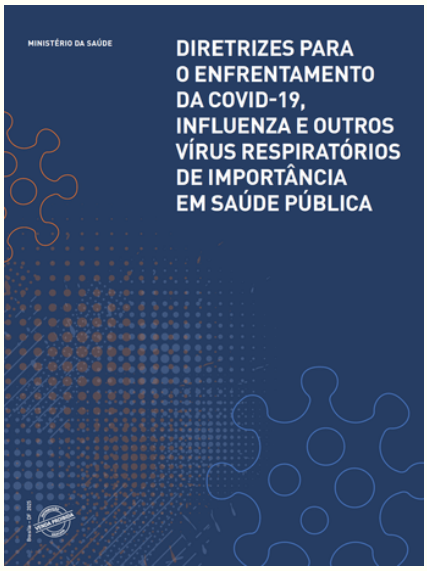
InfoGripe's communication strategy has ensured wide national visibility, consolidating it as one of Fiocruz's main references for the press. According to data from Agência Ponto MAP (2025), from 2020 to September 15, 2025, the InfoGripe bulletin maintained a monthly average of 2,177 impact points, peaking in May 2025, when hospital overcrowding due to influenza cases, associated with low vaccination coverage, generated extensive media coverage. The work of an InfoGripe spokesperson ensures space in major national media outlets with alerts regarding protective measures and, especially, vaccination. In addition to interviews, there is broad reproduction of the analyses included in the bulletin's dissemination materials, with coverage capillarity supported by extensive local-level content on case trends and predominant viral profiles, explored by local newspapers. Between January 2024 and September 2025, **more than 5,300 media insertions were recorded**. During the same period, regional outlets accounted for the largest share of coverage, representing 62% of the impact, compared to 38% for national outlets.

InfoGripe Outputs
(reference in the text and access by clicking on the image).

InfoGripe achieved significant outputs across multiple fronts. Identifying these outputs, as well as addressing contemporary project challenges, was made possible through the Pathfinder mapping: Operationalization of nowcasting for SARS, with publication of the methodology in an international peer-reviewed scientific journal and subsequent integration of the analysis into the routine conducted by the Ministry of Health.

- Continuous production of weekly bulletins and summaries with national, federative unit, and capital-level analyses, including adapted interpretations and, whenever possible, recommendations for the population.
- Increased media visibility, with technical spokespersons frequently cited in national and local outlets, including specialized media such as television news programs, as well as on social media.
- Influence on public policies, with methodologies used by the InfoGripe project being integrated into the seasonal influenza contingency plan and referenced in the Ministry of Health's epidemiological surveillance guidelines (Brazil, 2025).
- Technical capacity-building for state surveillance teams and the Ministry of Health.
- Strengthening of transparency throughout the entire process of analysis and dissemination of outputs through open science, with the availability of data, analytical scripts, bulletins, and summaries in public repositories.
- Presentation of the project at conferences in fields such as epidemiology, statistics, time series analysis, and collective health, expanding its visibility and strengthening scientific dialogue in Brazil and internationally, including in Portugal, Italy, and other countries.
- Doctoral theses and master's dissertations developed using InfoGripe data, further expanding its presence in academic settings.





InfoGripe Outputs
(reference in the text and access by clicking on the image).

Challenges and solutions

Management of interview overload: the pandemic generated a high volume of requests from the press across various media outlets, leading researchers to an intense schedule of interviews.

Solution: the integration of the Fiocruz Social Communication Coordination (CCS) as a project partner made it possible to centralize and plan the communication of outputs through interviews and publications, with the creation of communication groups, the establishment of a request flow, and the definition of priorities. The project also began to define spokespersons responsible for communication in interviews and on social media, a process which optimized the team's agenda and productivity. The CCS also began to systematize and analyze interview and audience reach data, leading InfoGripe to become a project with high recognition among civil society.

High workload demand during the pandemic: the arrival of the pandemic caused by Covid-19 significantly expanded the responsibilities of the team, which needed to ensure the rapid availability of reliable and verifiable scientific data. This scenario outputed in an intense accumulation of tasks among the few members of the project.

Solution: prioritizing technical and operational publications aimed at services and the population became the main means of disseminating the project's outputs. This decision implied postponing publications in scientific journals and the subsequent hiring of personnel to carry out this stage.

Initial difficulty in understanding the system and methodology: communicating SARS outputs in an accessible way to different audiences was one of the main challenges, given the complexity of the model and the need for understanding by managers and civil society.

Solution: to expand understanding of the methodology used by the project and facilitate the use of data by health professionals and interested individuals, InfoGripe promoted training actions and integration with the Ministry of Health. It also created a free course on the Fiocruz Virtual Campus platform, open to health professionals or individuals interested in the topic. In partnership with TGHN LAC, a thematic glossary of terms and concepts was produced, supporting the use of information in health action planning.

InfoDengue and InfoGripe course on the Fiocruz Virtual Campus.

Complexity in communicating statistical concepts: as the group is predominantly composed of researchers, the language used in publications often included terms and jargon specific to the fields of statistics and epidemiology.

Solution: continuous dialogue among partners and collaboration with the CCS allowed for refinement of the language used in bulletins, captions, and graphics, preserving technical rigor while expanding the reach of the information.

Trilingual InfoGripe glossary.

Lessons learned

As the main lessons learned during the Pathfinder mapping of the "Outputs and Impact" category, the following points can be highlighted:

The need to plan scientific publications in parallel with operational production, in order to enable the project to communicate its outputs both among peers in the scientific community and to other interested audiences.

The professionalization of communication as a key element for the sustainability of the project, through the partnership established with CCS/Fiocruz. This collaboration enabled more organized dissemination of the weekly bulletins and their summaries, as well as systematic monitoring of the project's impact and reach within society.

The importance of continuous feedback to ensure the usefulness and clarity of outputs, strengthened by the project management's commitment to maintaining close relationships with different interested audiences and by mapping the main communication challenges, a process further enhanced by the partnership with CCS/Fiocruz.

STAKEHOLDER ENGAGEMENT

InfoGripe emerged in a context of extensive debate and experience among researchers with the former MoH Influenza Working Group (GT-Gripe). From the outset, the project positioned itself within a scenario of close collaboration not only among its researcher members, but also between them and different actors and stakeholders. The project's management is oriented toward the production of outputs grounded in scientific evidence and engagement with partners, whether from civil society, the scientific community, or health professionals. InfoGripe has built a broad network of stakeholders that includes different actors across different spheres of society:

- Ministry of Health (federal level – Brazil)
- State Health Departments
- Municipal Health Departments
- National and regional press
- Scientific community
- International organizations (e.g., University of Exeter in the United Kingdom, Barcelona Supercomputing Center in Barcelona, TGHN LAC)

Stakeholders

Stakeholders are all interested parties who are affected by or can influence a project. The term comes from the English words "stake" (interest) and "holder" (one who holds), with the literal meaning of "holder of interest".

Engagement activities take place in different forms. The project maintains a **weekly situation room** where the team analyzes and discusses data. These meetings also bring in external guests and foster discussion of the outputs. The team maintains an open and direct communication channel with the General Coordination of Surveillance of Covid-19, Influenza and Other Respiratory Viruses of the Ministry of Health, with frequent exchanges of outputs and discussions. The project also maintains a permanent weekly engagement with the Fiocruz CCS team to respond to media requests and produce videos for circulation on social media.

Within the context of stakeholder engagement, among the challenges, solutions, and lessons learned identified through the mapping, some are listed below.

Challenges and solutions

Responding to emergency demands without compromising quality: the visibility of the bulletins and research outputs increased the demand for additional information, production of materials, interviews, and project submissions to funding calls.

Solution: the project improved its pipeline over the years, including the receipt of processed data, analysis, drafting, and discussion of weekly bulletins and summaries, production of communication materials, and responses to media requests. Workflows became more agile with the team's expansion and the partnership with CCS/Fiocruz. Increased contact with the Ministry of Health also expedited the exchange of outputs and ad hoc consultations. Currently, the entire process of production, discussion, and refinement of the bulletin takes approximately 24 hours, with dissemination occurring simultaneously with the Ministry of Health's weekly respiratory viruses update bulletin. Publication is simultaneously distributed to dozens of press and media professionals via email and messages sent through social media groups.

Ensuring correct interpretation of complex data: communication of epidemiological information faces the challenge of addressing distinct audiences, specialists, managers, and the general population, with different needs regarding data use and timeliness of access. In addition, it is necessary to ensure that products maintain scientific rigor without losing clarity, as well as to continuously incorporate improvements to facilitate the use and interpretation of information.

Solution: the project adopts an integrated communication strategy, based on multiple channels and formats. It provides bulletins, systems, and a new open-access dashboard; promotes close communication with stakeholders for continuous feedback; and maintains a self-assessment process. The team continuously seeks to improve products such as graphics, maps, intuitive visual categorization, explanatory texts, and videos for social media, as well as to release notes for diverse audiences. In this way, InfoGripe outputs reach different audiences with agility, accessible language, and scientific quality.

Lessons learned

- The integration between the institutional communication area and the technical team proved to be essential for improving the production flow and expanding the reach of outputs. The project shifted its engagement paradigm from a passive approach, in which it was sought out by stakeholders, to an active approach, with broad reach among traditional and social media professionals, as well as civil society.
- Strengthening partnerships with the MoH contributed to the project's outputs reaching specialized teams in Brasília and other cities in Brazil more quickly, reinforcing the practical application of evidence.
- The definition of trained spokespersons was fundamental to maintaining consistency in InfoGripe's messaging. The project relies on two individuals trained in the scientific communication of the project's outputs.

Synthesis

OUTPUTS, IMPACT AND STAKEHOLDER ENGAGEMENT

Below is a synthesis of the findings from the Pathfinder mapping regarding the outputs and impact and stakeholder engagement of InfoGripe.

ACCESSIBILITY
On this page, there are three vertical panels in a blue gradient containing a synthesis of the challenges, solutions, and lessons learned described above. The panels are organized into blocks with the component title and, respectively, challenge, solution, and lesson learned, followed by the description.

Cooperation and Application of Outputs

Challenge

Responding to emergency demands from partners and ensuring the correct interpretation of data by diverse audiences (the Ministry of Health, local managers, and civil society).

Solution

Continuous engagement with the Ministry of Health and health secretariats, weekly situation room meetings, courses, and thematic glossaries developed in partnership with TGHN LAC.

Lesson learned

Interinstitutional collaboration and capacity strengthening enhance the impact of InfoGripe on public policies and the qualified use of health evidence.

Data Production and Transparency

Challenge

Ensuring the weekly consolidation and analysis of large volumes of SARI data, guaranteeing quality, anonymization, and timely dissemination.

Solution

Structuring standardized verification routines, creating clear indicators, and continuously publishing bulletins, technical notes, and code in open repositories.

Lesson learned

Standardized processes and open science strengthen credibility and expand the use of outputs by managers, researchers, and society.

Strategic Communication and Institutional Engagement

Challenge

Translating complex technical information and handling high media demand without compromising quality and team productivity.

Solution

A structured partnership with CCS/Fiocruz to professionalize communication, define spokespersons, plan interviews, and monitor media reach.

Lesson learned

Active and planned institutional communication is essential for project sustainability and consolidation of its public image.

CONCLUSIONS

The mapping of InfoGripe demonstrated that the project's success lies in the integration of technical excellence, scientific transparency, effective communication, and strategic partnerships. These elements proved essential, especially during the Covid-19 pandemic, and left a legacy of sustained impact.

The adoption of the Pathfinder methodology enabled new InfoGripe researchers to become familiar with the project's trajectory, while more experienced members reflected on their own practices. The process also highlighted aspects that could be better understood and productivity bottlenecks that were effectively addressed and improved. The InfoGripe experience shows that projects in similar contexts can achieve high impact when they combine robust and validated methods; open data and code; structured stakeholder engagement; and continuous adaptation to new demands and epidemiological contexts.

The legacy of InfoGripe goes beyond robust, scientifically grounded monitoring of SARS; it offers a replicable model of how science, service, and communication can operate in an integrated manner to strengthen collective health in a sustained and responsible way.

Below are all the resources produced and activities organized as part of the partnership between the Fiocruz TGHN LAC team and the InfoGripe team through the Pathfinder mapping.

PART I
Planning

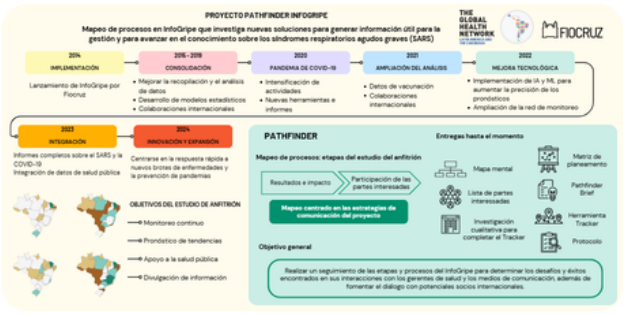
InfoGripe Pathfinder Protocol

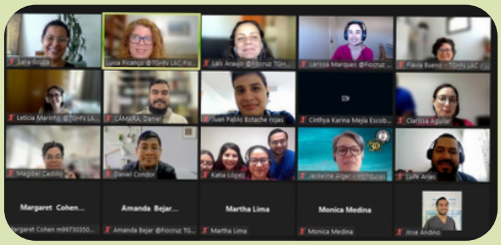
Portuguese, Spanish, and English

Pathfinder Planning Matrix

Mind map

Synthesis infographic of InfoGripe and Pathfinder





Pathfinder Workshop: how to begin?
participation
(August/2024)

Pathfinder Workshop: building the Pathfinder protocol with the host studies InfoDengue and InfoGripe
(setembro/2024)

Supported Learning Session Qualitative Methodology Pathfinder - Tracker
participation
(November/2024)

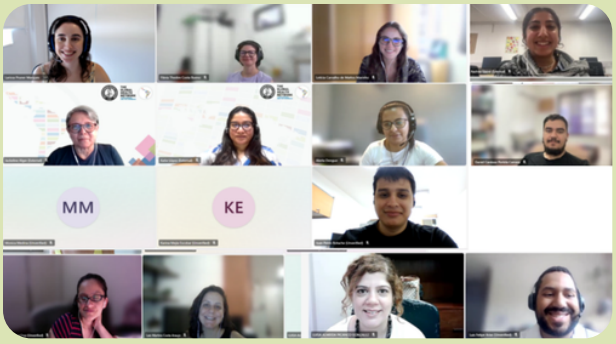
Supported Learning Session of the Tracker: exploring its use at TGHN LAC
participation
(May/2025)

PART II
Mapping

List of agents and stakeholders in InfoGripe
Identification of strategic actors for the mapping.

Tracker
Pathfinder tool containing the InfoGripe mapping data for the categories: "Outputs and Impact" and "Stakeholder Engagement", based on qualitative data sources.

- Documentary analysis – reports, technical notes, epidemiological bulletins, scientific articles, and repositories (Arca, GitLab and GitHub).
- Conversations with key individuals, guided by a semi-structured script with open-ended responses, conducted in person and online.



TGHN LAC Pathfinder Data Clinics

Monthly participation in meetings aimed at improving the use of the Pathfinder methodology and exchanging challenges and solutions in research with researchers from Latin America and the Caribbean.

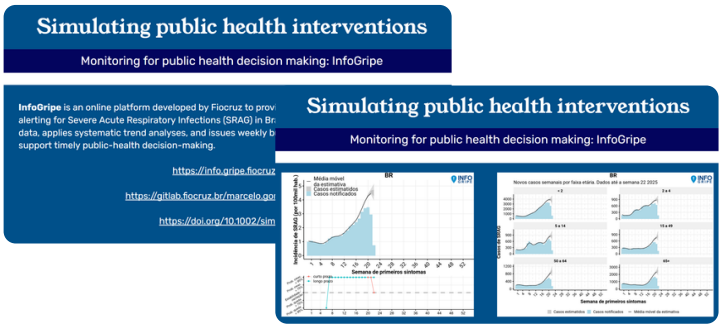
PART III

Productions

methodological and scientific

Case study on SARS surveillance

Infectious Disease Modeling Course (MOOC modality) of the Global Health Data Science Hub of TGHN, with a case study developed based on InfoGripe.



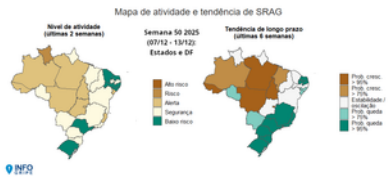
InfoGripe methodological article (in preparation)

PART IV

Productions

technological and decision-support

InfoGripe Data Dashboard



Trilingual Thematic glossary

Terms and concepts used in the monitoring and alert system, to facilitate understanding and use of information in health action planning.

PART V

Productions

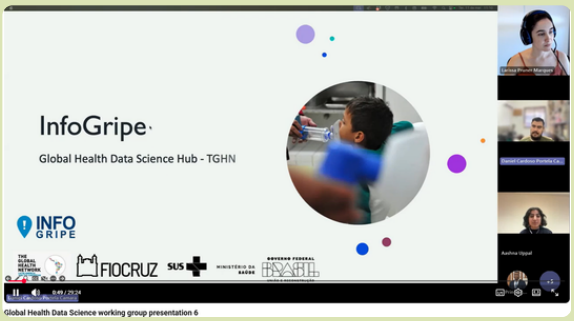
networks and capacity development

InfoGripe Research Club

Created on the TGHN LAC Platform to record and disseminate the work developed in the situation rooms.

Global Health Data Science Hub of TGHN

Dissemination, presentations (March/2025), and discussions about InfoGripe in meetings of the TGHN Hub.



TGHN LAC

Participation of InfoGripe researchers in different exchange spaces with researchers from TGHN LAC member centers.

PART VI

Productions

communication and scientific dissemination

XVIII Latin American Congress of Social Medicine and Collective Health

(Rio de Janeiro, August/2025)

- Roundtable Discussion "Scientific communication as a strategy for equity in health research in Latin America and the Caribbean".
- Workshop "Pathfinder n Health Research: mapping challenges and finding solutions to innovate".

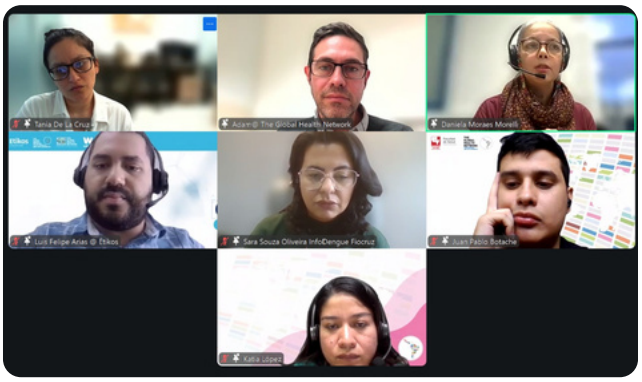
Experience Reports:

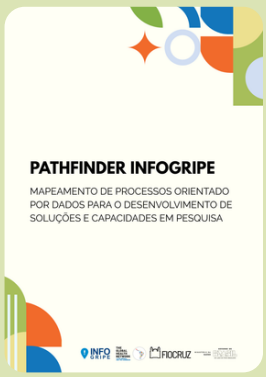
- "A practical approach to overcoming health research challenges through collaboration and innovation: Pathfinder studies in Brazil".
- "Strengthening preparedness and response to public health emergencies: the experience of Pathfinder studies in Latin America and the Caribbean".
- "Innovation and equity in health research: the experience of The Global Health Network Latin America and the Caribbean".

Trilingual webinar Building Capacity and Collaboration in Health Research: Lessons from Pathfinder Studies in Latin America and the Caribbean

(December/2025)

Presentation of the outputs of the InfoGripe mapping at the TGHN LAC webinar.





Pathfinder InfoGripe Report
Portuguese, Spanish, and English

Access more outputs of the mapping on the Pathfinder InfoGripe webpage.

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