Pathfinder

BIRTH IN BRAZIL II

Challenges, solutions and learnings

The **Pathfinder**, a study based on a research project, employs a methodological approach to map key stages and indicators, helping to identify obstacles and solutions, as well as capturing and sharing the tools and methods used by the project.

The “Nascer no Brasil II” (Birth in Brazil II) study, a continuation of the national study Nascer no Brasil, was chosen as Pathfinder due to its continued existence as a successful research project that has significantly contributed to the improvement of public policies, legislation and care practices in reproductive health of women and newborns. The mapping enabled challenges and solutions to be identified, resulting in valuable lessons that can be applied to other projects.

PATHFINDER: DATA-DRIVEN PROCESS MAPPING FOR CAPACITY BUILDING IN RESEARCH

Pathfinder is a study based on a research project (called a host study) that uses a methodological approach based on process mapping of research cycles contributing to other projects, especially those built in research environments with few resources, can be nourished with tools, solutions and lessons learned from exemplary studies.

Pathfinder's objectives involve:

I. identifying and recording the necessary steps for the success of the host study;

II. tracking the key indicators, such as time spent and resources required, for each step to generate a process map;

III. supporting the host study in identifying obstacles and finding solutions that enable the research objectives to be realised;

IV. capturing and sharing the tools, methods, technology or governance processes used to solve each challenge.

The **Birth in Brazil II (NBII)** project was preceded by the Birth in Brazil (NBI) project, which was a national survey about attention to women's reproductive health and newborn health, was selected for the **Pathfinder** study due to the great relevance of its theme and impact on the Brazilian health system. Research such as the NB is fundamental for reproductive health and seeks to establish a continuous system for monitoring procedures and results regarding obstetric care in Brazil, promoting best practices related to the health care of women, children and adolescents. NB's findings played a crucial role in catalysing a series of government initiatives and policies aimed at improving prenatal care and reducing the caesarean section rate in Brazil.

The mapping of t**he second survey, the NBII**, was carried out using the "tracker" tool of the **Pathfinder** methodology and its sources were: documents, conversation circles and individual semi-structured interviews, carried out with key actors. During this qualitative information survey, carried out in 2023, it was possible to identify the skills, tools, barriers, challenges, obstacles, limitations, solutions and lessons learned. It is important to highlight that one of the objectives of mapping is to find solutions to overcome such obstacles, also serving as support for research carried out in other contexts, but which may face similar challenges.

Learn more about the Pathfinder methodology.

CONTEXTUALISING BIRTH IN BRAZIL II

The NBII is the second national survey on women's reproductive health care and the health of newborns. The study is organised and conducted by the Women's, Children's and Adolescents' Health Research Group, linked to the Department of Epidemiology and Quantitative Methods in Health at the Sérgio Arouca National School of Public Health at Fiocruz - Rio de Janeiro, Brazil.

The first survey, NBI, was a pioneer in the area, carried out in 2011 and 2012, interviewing and collecting data from medical records, ultrasound images and prenatal cards from 23,894 women in 266 public, mixed and private health establishments in 190 Brazilian municipalities. The aim was to assess prenatal care, labour, birth and the puerperium, mainly to measure the excess of interventions and hypermedicalisation of childbirth's natural and physiological processes, estimating their repercussions on the incidence of clinical complications, the prevalence of prematurity and other maternal and neonatal outcomes.

23.894
women

266
public, mixed and private health establishments

190
Brazilian municipalities

2011 — **2012**

In 2021, the NBII began collecting data from approximately 20,000 women in approximately 400 maternity hospitals. Compared to study I, the questions covered were expanded to include abortions, obstetric violence and its repercussions, the quality of the hospital structure, the level of knowledge and preparation of care teams, the mental health of mothers and fathers, severe maternal morbidity, maternal near miss, maternal death and perinatal death (foetal and neonatal losses).

20.000
approximately women

400
maternity hospitals approximately

2021 — **2024**

Studies such as the NB are essential in the context of reproductive health. The NBI and its findings were responsible for driving a series of measures and public policies to improve prenatal care and reduce the prevalence of caesarean sections in Brazil. Even so, despite the progress made in obstetric care in public and private hospitals, challenges remain in terms of expanding the appropriate use of technologies for childbirth and abortion care, reducing unnecessary caesarean sections, reducing delays in urgent and emergency care and improving hospital infrastructure.

In this way, the NB seeks to implement a permanent monitoring system for the processes and results of obstetric care in the country, evaluating the effects of the intervention and improvement programmes implemented in the interim between the two studies and addressing complex and relevant issues in the reality of women's, children's and adolescents' health care in the reproductive context.

The results found from mapping activities related to **research planning and management and access** to **Pathfinder** data are presented next in the form of recommendations so that not only the NB team, but also other research projects with similar objectives and study locus can apply these learnings and improve their research processes.

STUDY POPULATION

CHALLENGES

Request from the Brazilian Ministry of Health to include hospitalisations due to abortion, due to the high morbidity and mortality rate and the scarcity of national studies evaluating characteristics, care received and complications. This is a delicate subject with various legal implications and a great deal of stigmatisation. An unfavourable cultural and political context could disturb the analysis and bias the results.

SOLUTIONS AND LEARNINGS

Creation of an adapted, printed, anonymous, self-completion questionnaire to be deposited in a sealed ballot box.

Special guidance for interviewers on the approach, especially when approaching mothers in collective accommodation in hospitals to hand in the questionnaire.

SAMPLE DESIGN

CHALLENGES

The need to overcome statistical limitations observed in the previous study (NBI) to improve representativeness and external validation.

The increase in the number of hospitals and expanding the geographical area to include remote regions with less infrastructure brought challenges such as greater difficulty obtaining the institution's consent, the complex logistics of training and operating in the field, and higher costs for relocating the teams.

The remuneration model for coordinators proved insufficient to maintain the activity for as long as was necessary.

SOLUTIONS AND LEARNINGS

To overcome statistical limitations, there was an increase in the number of private hospitals, achieved by the inclusion of smaller hospitals (100 - 499 births per year), and reformulating the division of strata according to location.

State coordinators, key figures in charge of the whole dynamic of relationships with hospitals, recruitment, selection, training and field follow-up, had to stay active in the project for longer. In other cases, professionals from central areas were hired and mobilised to travel to these regions and complete the fieldwork. We realised that there is a clear trade-off between the granularity, scope and quality of the fieldwork.

For future experiments, it will be necessary to dialogue with the samplers about including remote regions and, if this is maintained, to hire and train a central group to work alongside the local group, supplementing any gaps that may remain.

The remuneration model for coordinators must consider the possibility of extending fieldwork for this reason.

HOSPITAL AND WOMEN SELECTION

CHALLENGES

Including private sector institutions made it clear that they operate under very different dynamics from the public sector. There was a fear that women in private institutions would feel uncomfortable being interviewed for the study or an understanding that the fact that they pay places them at a level of privacy that is not afforded to users in the public sector.

SOLUTIONS AND LEARNINGS

In most cases, these challenges could only be overcome through the coordinators' relationships with the focal points in these institutions and the degree of access the latter had with the hospital administration. It was found that state coordinators who had built up a broad set of relationships with various institutions and people found it easier to move through these spaces and that the most influential interlocutors are not always those in leadership positions in the hospitals. Therefore, identifying these focal points is a complex task that requires in-depth knowledge of local dynamics and investment in good relationships with stakeholders, even before the fieldwork begins.

APPROACHING INSTITUTIONS (ETHICS COMMITTEES)

CHALLENGES

As in any national study, it is necessary to develop an approach strategy that considers the specificities of the institutions to be approached and, in the specific case of Brazil, it is a country of continental dimensions organised on a federated basis. Institutions are subject to various legal structures and regulatory bodies, which must be considered when drawing up the approach plan. It was a major challenge for the NBII to include private hospitals, to deal with the administrative, logistical and operational differences they presented about the public network, and in particular, to see how difficult it was to get approval from the institutions' ethics committees.

SOLUTIONS AND LEARNINGS

One of the developments in the previous study (NBI) was the secondment of a professional dedicated to managing and monitoring the submission processes to ethics committees and obtaining letters of consent from institutions. This work had to be combined with the presence of state coordinators with good contacts in the administrations and with sufficient sensitivity to overcome the obstacles arising from the political context. The NBII prioritised submitting the project to the National Research Ethics Commission on the mistaken understanding that its approval would have a binding effect on the other committees. It was realised that despite not having the legal and administrative authority to oblige the other committees to follow its decisions, it was a complicating factor because it required that all modifications submitted to the hospital committees be replicated in the NBII.

For future experiments, the strategy of submitting to the National Commission will be abandoned, and the study's coordination will continue to demand that Nascer no Brasil be elevated to the status of a compulsory national survey by the Ministry of Health to resolve institutions' refusal to take part in the study.

DATA COLLECTION (HOSPITAL INTERVIEWS)

CHALLENGES

Two central problems were detected in the hospital interviews:

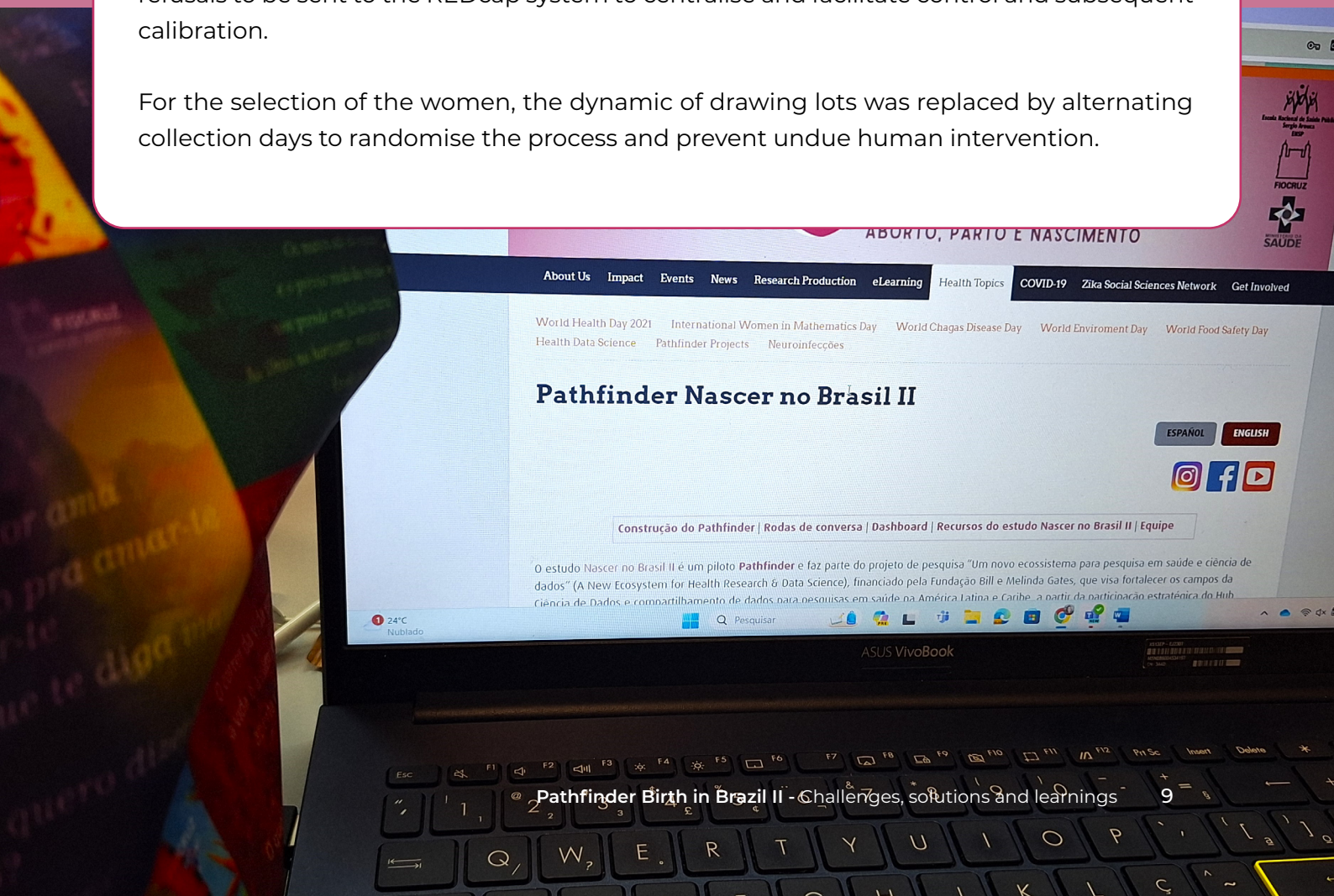
I. a discrepancy between the women listed for interviews, including losses and refusals, and the database contained in the survey application (REDcap), resulting from not transporting all the women on the list to the system;

II. the system for drawing lots for women eligible to take part in the study, which was susceptible to manipulation in order to select women whose clinical conditions were simpler and therefore less complicated to collect information on, with fewer fields to fill in, a smaller number of questions and less sensitive topics to be addressed.

SOLUTIONS AND LEARNINGS

The data discrepancy was resolved by adapting the questionnaire and forcing losses and refusals to be sent to the REDcap system to centralise and facilitate control and subsequent calibration.

For the selection of the women, the dynamic of drawing lots was replaced by alternating collection days to randomise the process and prevent undue human intervention.



DATA COLLECTION (FOLLOW-UP INTERVIEWS)

CHALLENGES

The study design stipulates that in addition to the face-to-face interview and the collection of medical records and other documents relating to the pregnancy, these women should be contacted again in two follow-up waves, one two months after giving birth and the other four months later. It was noticed from previous experiences that events of obstetric violence, intimacy, post-traumatic stress disorder and other similar phenomena are better approached and observed when there is a time gap between their occurrence.

Sometimes, it is necessary to wait not only for the most critical moments to have passed but also for the perception of having been in a situation of violence to be consolidated in the mother's perception. For these interviews, obstacles were identified in the previous study, such as loss (interviews not being conducted), too long deadlines, difficulty in visualising and controlling the work.

SOLUTIONS AND LEARNINGS

In contrast to the previous study (NBI), the migration to the REDCap platform made some important improvements possible, such as the development of calculated variables based on the date of delivery and indicating, on a specific form created to monitor the collection, the date on which the follow-up intervals would take place. As follow-up interviews were planned after childbirth, a list of the women and their contact details was prepared each month by a supervisor specially dedicated to this field and sent to the interviewers to start contacting them. This supervisor was responsible for monitoring the field, assessing the preliminary quality of the data, demanding corrections, organising the field and distributing the women to be interviewed, checking production and authorising payment for the collection team.

DATA COLLECTION (PATERNAL INTERVIEW)

CHALLENGES

There was little response to the contacts made for the paternal interview. An innovation of this research is to investigate paternal health, as national and international literature points to the possibility of worsening of paternal psychological conditions during the partner's pregnancy. Therefore, it was necessary to adjust the procedures as the field unfolded, in order to obtain the number of interviews necessary to produce data in a representative manner.

SOLUTIONS AND LEARNINGS

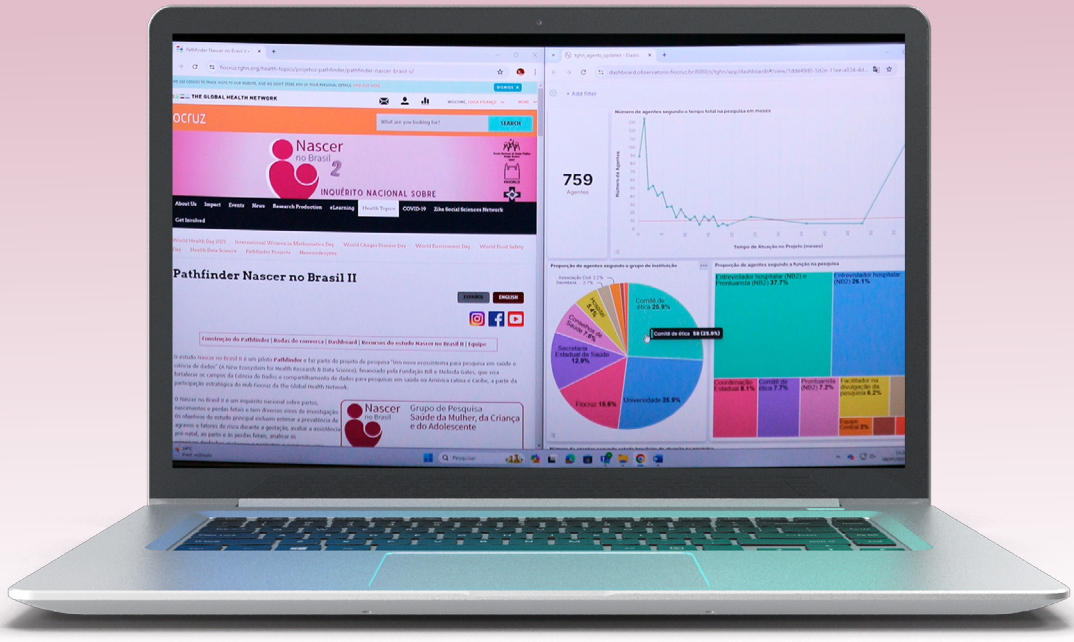
When contacting men for paternal mental health questionnaires, various approaches were tried. It emerged that the approach must first be appropriate to the socio-cultural context of the place. The first contact attempts were via SMS, a technology favoured over WhatsApp in Brazil. Switching to WhatsApp considerably increased the return rate. Another critical point that was noticed was that personalised and customised approaches had a higher success rate. An impersonalised, purely institutional approach was unlikely to generate any return. When a more humanised message was chosen, with personal identification of the researchers and clarification of the importance of the research, the return rate improved considerably. Then, when possible, the targeted messages were personalised, referring to the recent birth event and using the names of the interviewees, their spouses, and the baby, which once again improved success rates.

Finally, audiovisual material was developed with explanatory cards and links to the survey's official websites so that interviewees could be sure of the approach's privacy and suitability. In its final form, the ideal approach was multichannel (SMS, WhatsApp, email, phone calls), personalised, customised, with supporting visual materials, and inserted into an approach schedule that involved multiple attempts and active search.

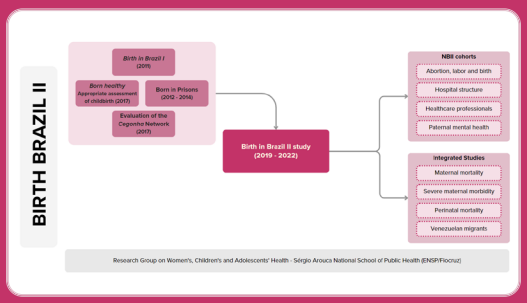
FINAL CONSIDERATIONS

The NBII **Pathfinder** study revealed the main problems faced, the solutions adopted and the lessons learned in the research planning, and data management and access stages. From the mapping, several challenges were identified, from the inclusion of private institutions, obtaining consent from institutions, the logistics of training and field operations in remote locations, the coordinators' remuneration model, the possibility of bias in the selection of women in hospitals, the collection of sensitive data, such as obstetric violence and even the low response rate for paternal interviews. In view of these, several innovative solutions were necessary, such as personalised approach strategies, adaptation of questionnaires, training of a central group to work in parallel with the local group, the selection of women on alternate days in hospitals, the use of communication technologies and an effective monitoring system.

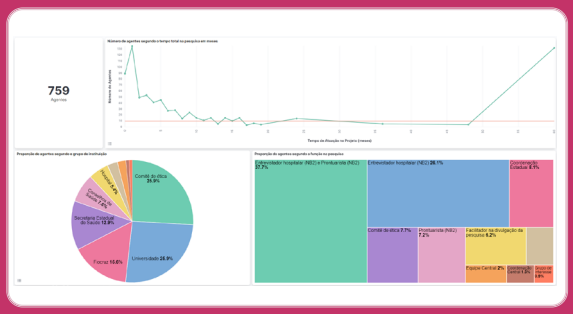
Pathfinder allowed us to capture the project's complexity and reflect on the structure, bringing reflections that strengthen the team's capabilities and scientific collaboration for the study in question and other research. The lessons learnt from the NBII can guide similar future research, highlighting the importance of careful planning, flexibility in implementation, and the search for sensitive and effective approaches. In addition to what has been presented here, other materials have been produced from the Pathfinder NBII, further enriching knowledge and collaboration for health research.



BIRTH IN BRAZIL II PATHFINDER PRODUCTIONS



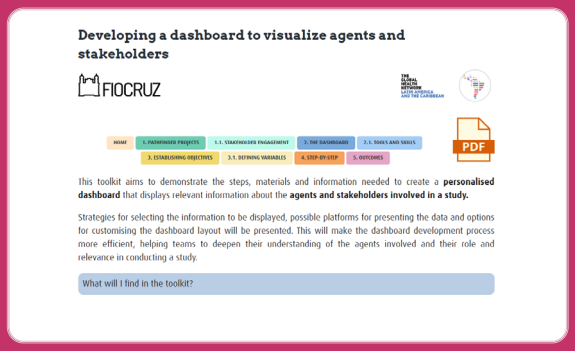
Mind map and timeline of the NBII



Pathfinder Dashboard: agents and stakeholders of the NBII

Pathfinder Birth in Brazil II: Challenges, solutions and learnings

NBII monitoring, evaluation and data collection projection **dashboard**


Developing a dashboard to visualize agents and stakeholders

FIOCRUZ

PDF

This toolkit aims to demonstrate the steps, materials and information needed to create a **personalised dashboard** that displays relevant information about the **agents and stakeholders involved in a study.**

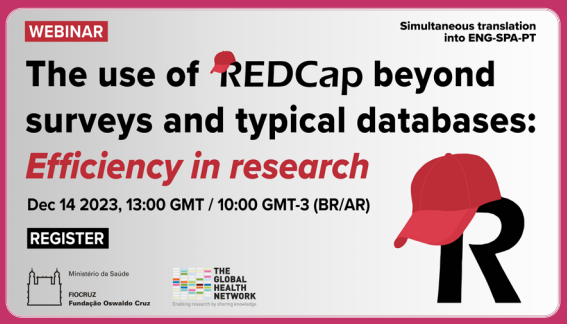
Strategies for selecting the information to be displayed, possible platforms for presenting the data and options for customising the dashboard layout will be presented. This will make the dashboard development process more efficient, helping teams to deepen their understanding of the agents involved and their role and relevance in conducting a study.

What will I find in the toolkit?

Toolkit "Developing a **dashboard to visualise agents and stakeholders"**

Toolkit "Monitoring, evaluation and data collection projection - R and REDCap interaction"

Toolkit “Qualitative research methodology for the **Pathfinder** tracker”



Webinar “Using REDCap beyond questionnaires and typical databases: efficiency in research”

In-person workshop “Tools to promote engagement and mobilisation in collective health (Brazil, India and Malaysia)”

Development of the Birth in Brazil I and II **Data Management Plan**

Organising and updating the data **repository in Arca Dados**

For more details, click here.

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