Evaluation of the Rede Cegonha: feedback of results for Brazilian maternity hospitals

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Abstract This paper describes and analyzes the process of providing feedback on the results of the second evaluation cycle of good practices of delivery and birth care in maternity hospitals linked to the Rede Cegonha, a Ministry of Health strategy implemented in 2011 to improve obstetric and neonatal healthcare and management. This is a qualitative study based on the documentary analysis of 27 reports from the states and the Federal District referring to the feedback workshops with 1.641 participants, 40% of whom were professionals and managers of the maternity hospitals evaluated, 25% of state representatives, 20% of municipal health secretariats and 15% of federal representatives. Around 46% of maternity hospitals’ action plans in 11 states were received from January to August 2019. The results show the challenge of incorporating the monitoring and evaluation processes in these maternity hospitals’ daily lives due to structural issues in institutional culture. This situation interferes with the local systematic analysis of information and the implementation of national evaluation cycles with the swift and continuous feedback of the results since access to secondary national data is non-existent in good delivery care practices.

Key words Health assessment, Health management, Healthcare models, Rede Cegonha, Delivery
Introduction

The number of maternal deaths in a country is an excellent indicator of its social and economic reality. It reflects the quality of health care, gender and ethnic-racial inequities, regional inequalities, political determination, and the public health system’s strengthening. The reality of Brazilian Unified Health System (SUS) managers concerning maternal death in Brazil is complex. Significant regional differences are observed in their determinants and strategies for their reduction. The challenges of overcoming institutional, social, and cultural barriers in scientific evidence-based practice conditions to implement national and international recommendations.

When analyzing the population of women with pregnancy complications, we can observe that a significant portion of this population suffers delays in care, whether regarding the early detection of complications, the use of appropriate interventions, or coordination between the levels in the health care system. From a technological and political-institutional viewpoint, effective preventive or therapeutic interventions to reduce maternal mortality are available in Brazil and carried out in some local territories. Actions, programs, and strategies have been implemented with some advances in the country since 1984.

In the 1990s, the maternal mortality ratio was 143/100,000 live births (LB), reaching 72/100,000 LB in the 2000s. In the 2000-2010 period, this ratio ranged from 69 to 72 deaths/100,000 LB, with a new range of 62 to 65 deaths/100,000 LB between 2010 and 2017 (Graph 1).

However, even with the reduction of more than 50% of maternal deaths, Brazil is still far from reaching the 30 deaths/100,000 LB, a target agreed in the Sustainable Development Goals. Several national policies and regulatory frameworks have been implemented since then. Among them are the National Agreement for the Reduction of Maternal and Neonatal Mortality, the Agreement for the Reduction of Infant Mortality in the Northeast and the Legal Amazon, the National Women’s Comprehensive Health Care Policy, and the National Child Comprehensive Health Care Policy, which point to principles and guidelines in line with international standards. The challenge concerns the mobilization of health managers and workers and the ability to generate sustainable health practice conditions to implement national and international recommendations.

In this scenario, in partnership with CONASS (National Council of Health Secretaries) and CONASEMS (National Council of Municipal Health Secretariats), the Ministry of Health (MS) established the Rede Cegonha (RC), through Ordinance GM/MS No 1459 of 2011 (revoked by Consolidation Ordinances N°3 and 6 of 2017). This standardization was based on SUS Health Care Networks (RAS) guidelines and delivery and birth care from the World Health Organization. These were later updated into the National Clinical Protocols and Therapeutic Guidelines for Cesarean Surgery and Normal Delivery in the SUS.

Three objectives were established in the regulation of the RC: (i) To promote the implementation of a new women and child health care model with a focus on delivery, birth, growth, and development of children from zero to twenty-four months; (ii) To organize the Maternal and Child Health Care Network to ensure access, reception, and resolution; and (iii) To reduce maternal and child mortality, emphasizing the neonatal component. Its guidelines refer to (i) Ensuring reception with risk and vulnerability assessment and classification; (ii) Expanding access and improving quality of prenatal care; (iii) Ensuring that pregnant women are linked to the reference unit and safe transportation; (iv) Ensuring good practices and safety in care during delivery and birth; (v) Ensuring health care for children from zero to twenty-four months with quality and resolution; and (vi) Ensuring access to reproductive planning actions.

Aligned with the constitutive elements, attributes, and strategies of the RAS in the SUS, the RC defined actions to qualify the care management by components and stages of operation. Within the Network Governance, it allowed the establishment of the Rede Cegonha State Conducting Groups (GCE-RC), with the representation of the three federated entities: State Health Secretariat (SES), responsible for the general coordination of the GCE-RC; Council of Municipal Health Secretariats (COSEMS), and institutional support from the Ministry of Health, responsible for (1) Mobilizing SUS political leaders in each operational phase of the RC; (2) Supporting the organization of work processes to implant/implement the RC; (3) Identifying and supporting the solution of possible critical points in each stage of the RC; and (4) Monitoring and evaluating the implantation/implementation of the RC.

Considering the five-stage operationalization of RC (I - Adherence and diagnosis; II - Regional Design of RC; III - Contractualization of Care Points; IV - Qualification of components and V
monitoring and evaluating maternity hospitals was one of the responsibilities of the GCEs, in order to verify the completion of the health care actions in each component of the Network, and in the case of this study, the Delivery and Birth component.

From 2013 to 2015, in partnership with the State (SES) and Municipal (SMS) Health Secretariats, the MS carried out the first evaluation cycle of the maternity hospitals included in the regional action plans published until 2014, and the evaluative visits were performed in the 2014-2015 period. Three guidelines were evaluated during this period in 250 services, conducted by GCE-RC with general coordination by the Ministry of Health (MS). The second cycle started in 2015, with evaluative visits in 2016-17, and the presentation and discussion of the evaluation results with the services were held in 2018-19. A total of 626 services were evaluated in the second cycle regarding five guidelines, 17 devices, and 60 verification items. Given the expanded evaluation scope, the MS established a partnership with research institutions, the Sérgio Arouca National School of Public Health (ENSP/Fiocruz) and the Federal University of Maranhão (UFMA), both with experiences in the evaluation of delivery and birth.

The evaluation question that guided the monitoring process referred to implementing good practices in delivery and birth care. One of the primary methodological references was the understanding that the evaluations contribute to the qualification of management and clinical practice. The assessment has many purposes, “whether they are official or unofficial, explicit or implicit, consensual or conflicting, shared by most actors or only a few”19. The formative and transformative purposes were highlighted in the RC, that is, to provide strategic information that can support decision-making to improve intervention during the activity, using the evaluation process as leverage to transform an unfair or problematic situation, as the assessment aims to improve collective well-being20.

The RC perspective is anchored in the National Humanization Policy (PNH) and considers the evaluation processes as spaces, moments of debate, and one’s health practice analysis. One of the focuses of analysis (and promotion) is the established networks as a condition for changes in health care. As proposed in the RC, the three management spheres (MS, SES, and SMS) par-

![Graph 1. Maternal Death Ratio in Brazil. 1990 to 2017. Ministry of Health, Brazil.](image-url)

Source: DANTPS/SVS/MS14
ticipated in the evaluation process, strengthening their commitment to the Network’s governance.

Thus, the evaluation of maternity hospitals was carried out in direct relationship to their usefulness for improving the daily practice of local policies and organizational learning, with gains for the intended results, promoting what Figueiró et al. 21 highlight as one of the aspects of knowledge production modes in the use of evaluations, that is, utility-based evaluation, with the involvement of stakeholders, generating changes in thinking, behavior in practices and institutional cultures, as a result of learning during the evaluation process.

The Feedback Workshops aimed to induce the qualification the delivery and birth care model and guide the renegotiation of commitments signed in the RC’s regional action plans. It is an evaluation as a tool for the management of health work, enabling the development of group competence, fundamental for the production and reorganization of health actions and services aimed at the population’s needs 20,21.

One of the central issues for the RC implementation process was organizing it within health care regionalization and the principle of co-management 22,23. From the beginning, the implementation process aimed to stimulate the creation of regional conductive groups and encourage the shared development of the stages of diagnostic analysis, planning, implantation, and evaluation of the network among the group of workers from different points of care and managers of each health region.

In this context, the methodological proposal of the evaluation feedback process promoted the inclusion of different professional categories, points of care, and managers, contextualizing the discussion in each health region for the analysis and possible agreements to improve the quality of care.

This paper describes and analyses the process of providing feedback on the results of the second evaluation cycle of good practices in delivery and birth care in maternity hospitals linked to the RC, based on the proposed methodological, theoretical alignment of assessment, focusing on the potential to contribute to improving management, obstetric and neonatal care.

Methods

This paper is nested in the evaluative study Delivery and birth care in maternity hospitals linked to the Rede Cegonha, carried out from December 2016 to October 2017. The evaluation of maternity hospitals was conducted by Rapid Participative Estimation 24,25 to obtain information that reflects local conditions from the perspective of the different social actors involved with the evaluative object. It were included public and mixed hospitals (private SUS-affiliated) that, in 2015, (i) performed 500 or more births in a health region with a RC action plan and with the release of resources (n = 24).

The evaluation process was agreed upon the 27 RC State Conducting Groups, with the participation of local managers in the different evaluation stages: stage 1 - Construction of the assessment instruments and organization of fieldwork; step 2 - Fieldwork and data processing; step 3 - Elaboration and validation of the evaluation matrix; step 4 - Classification of the implantation level; step 5 - Preparation of state and maternity hospital reports.

The following strategies were adopted to strengthen the tripartite governance of RC, which culminated in the Feedback Workshops. The evaluation process actions were: (i) Letter from the MS to the SES, COSEM, and SMS informing about the objectives and expected results of the evaluation process, with a description of necessary documents to be analyzed at the time of the evaluation visit; (ii) Meeting with RC State Conducting Groups for methodological alignment and sharing of responsibilities; (iii) Definition of representatives from SES, COSEM, and SMS responsible for monitoring evaluative visits by services; (iv) Tripartite construction and monitoring of the schedule of joint visits (evaluators and representatives of the GCE-RC); (v) Official communication to the services about the purpose and date of the evaluation visit; (vi) Evaluative visit to the service; (vii) Preparation of reports by service and Federative Units (UF); (viii) Meeting with the GCE-RC to present and analyze the data found; (ix) Meeting of the GCE-RC for feedback and developments of results with the maternity hospitals; (x) Feedback workshops with the maternity hospitals.

The feedback process with the maternity hospitals included two stages: the first was the presentation of the results to the representatives of the GCE-RC, health secretariats, and COSEM, called preparatory meeting, to show the results of the state and discuss the main characteristics, potentialities, challenges, and developments under the responsibility of SUS managers, and then define the strategy for discussion with the ser-
vices evaluated in the state. This meeting defined
the participation of the Research Institutions,
UFMA, or ENSP in each Feedback Workshop
and the sending of invitations to the representa-
tives of the GCE-RC, of the services – directors
and medical and nursing coordinators of the ob-
estrics and neonatology units of the maternity
hospitals. The crucial points for the Feedback
Workshops were: (i) Group presentation of the
results to the services, gathered by health reg-
ions, to foster horizontal cooperation between
the services and mobilize regional articulation,
including the possibility of interacting with the
managers in the Regional Interagency Commit-
tee (CIR) and the Bipartite Interagency Commit-
tee (CIB); and (ii) the importance of the agenda
for the continuity of monitoring and evaluation
of Good Practices by the GCE-RC, with the MS
presenting the proposal for maternity hospitals’
action plans according to the results achieved in
the second evaluation cycle.

The second stage of the feedback process
with the maternity hospitals was called Feedback
Workshops. The RC objectives, principles, guide-
lines, and the method and stages of the evalu-
ation process were resumed at these Workshops’
opening. Two types of reports were presented:
one at the state level and the other at the local
level, that is, for each evaluated service. The eval-
uation reports prepared for each Brazilian state
covered three aspects: (i) Characteristics of the
participating maternity hospitals, managers,
workers, and puerperae; (ii) Results by guideline,
device, and verification item by state and mater-
nity hospital. Each maternity hospital received
the results by guideline, device, and verification
item, according to the report format in Table 1.

In the reports by service, the conceptual
frameworks of each guideline were presented
with the respective classification by level of im-
plementation, followed by open fields for the
institution to record whether that result was ade-
quate for that moment, the justifications for the
non-adequacy, the strategies for improvement,
with the identification of those responsible and
deadlines. This joint exercise, between the ma-
ternity group and representatives of the health
secretariats, of comparing the situation found at
the time of the assessment with the current situa-
tion, aimed to draw up the action plan for qual-
ifying delivery and birth care, and the continuous
monitoring by local actors with support from the
Ministry of Health’s technical areas.

Quantitative and qualitative data were used
based on documentary analysis of the 27 state
reports of the Feedback Workshops carried out
by the technical references of the MS Coordin-
tors of Women’s Health and Child Health to de-
scribe and analyze the results feedback process,
the object of this paper. The reports included
each meeting’ design and dynamics, the number
of participants and institutional representation,
primary debates held, questions, concerns, and
recommendations.

The Human Research Ethics Committee of
the Federal University of Maranhão and the Sérgio
Arouca National School of Public Health ap-
proved the research, on December 14, 2016.

Results and discussion

Participation in the Results Feedback
Workshops

The Feedback Workshops aimed to analyze
the results with the managers of the health sec-
retariats and health establishments to propose an
intra and interinstitutional work agenda geared
to improving the quality of care through strate-
gies for the sustainability of successful actions and
sharing responsibilities in the face of the need for
actions to overcome difficulties. As highlighted in
other studies, these difficulties demand the elab-
oration of systematic surveillance strategies26,27,
collective analyses28, building belonging and
usefulness for the subjects involved, which could
represent the defense of ethical principles of the
right to universal and comprehensive health and
citizenship29 and thus overcome the challenges of
maternal and neonatal mortality30.

In general, the Workshops had the follow-
ing sequence: (i) Presenting the objectives of the
evaluation process; (ii) Presenting the evaluation
method; (iii) Showing State results; (iv) Discuss-
ing results by maternity hospital; (v) Performing
and analytical exercise of the report by service;
and (vi) Programming the work agenda to con-
tinue monitoring and evaluating good practices.

According to the number of maternity hospitals
and the distance between services, some states
have chosen to concentrate the exercise in the
capital. However, the analysis by health region
was maintained. Some states, represented by SES
and COSEMS, propositionally presented a bal-
ance of actions carried out within the state RC
and its main challenges.

A total of 1,641 professionals participated
in the Feedback Workshops, including health
secretaries and technicians from the SES (405),
SMS (287), COSEMS (33), the State Public Prosecutor’s Office (8), directors and medical/nurse coordinators of the obstetrics and neonatology units of the maternity hospitals (662), institutional supporters of the MS State Centers, representatives of the Women’s Health and Child Health Coordination offices of the MS (107), and the Federal University of Maranhão or ENSP/Fiocruz (28). According to the attendance lists of the Feedback Workshops, a significant participation of the managers of the maternity hospitals (40% of the total participants) among technical directors and coordinators of obstetrics and neonatology/pediatrics was observed, with emphasis on the presence of the technical coordinators and professional nurses, which promoted the qualification of the delivery and birth care model. Primary Health Care (PHC) representatives and the central management of the health secretariats also participated, which allowed a debate about the challenges of integration between the points of care for comprehensive care (Graph 2).

Worth mentioning is also the participation of COSEMS in 17 UFs. As entities representing the municipal entities at the state level, such participation contributes systematically and exponentially to the interfederative actions and definitions concerning the national and local delivery and birth care policy.

Noteworthy is the participation of representatives of the Public Prosecutor’s Office (MP) in 8 UFs, which allowed the exchange with the SUS to act in solidarity in the protection and defense of health by developing activities that contribute to the effective respect of public authorities and public relevance health services to the right to health and promote the measures necessary to ensure it. This participation is critical inter-institutional cooperation in the search for the right to citizenship and universal and comprehensive health, showing SUS managers and professionals and government officials the operational, broad, and complex concept of health care, such as, for example, a public civil action to guarantee federal laws on the right to a companion during delivery, pregnant women’s right to knowledge and the link to a maternity hospital where they will receive care in the SUS, public policies for early childhood, and state laws (until 2019, 16 states had enacted State delivery and birth laws). The plural and heterogeneous representatives facilitated a thoughtful debate about the situations experienced by the three spheres of management’s care and management institutions. This reflective and pragmatic effect of the diverse actors involved with a given health policy is in line with studies that show the coverage and breadth of players involved in the evaluation process facilitates its usefulness and intervention capacity to improve care and manage healthcare.

Main themes about delivery and birth care models

It is worth highlighting the main themes registered in the state reports that emerged by discussing the results of the evaluation and its consequences. Issues related to high-risk maternity hospitals and their specificities, such as adopting recommended practices and implementing

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<tr>
<th>Chart 1. Maternity report format.</th>
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<tr>
<td>Guideline 1</td>
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<tr>
<td>Device /</td>
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<td>Name of device</td>
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<tr>
<td>Quartile Result Color: BLUE (adequate: 100.0 to 75.01); GREEN (partially adequate: 50.01 to 75.0); YELLOW (incipient: 25.01 to 50.0); RED (inadequate: 0 to 25.0) and WHITE (not applicable: verification item did not fulfill the conditions specified for its assessment)</td>
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unnecessary interventions, were discussed in the light of WHO recommendations. The debate with SUS services and managers allowed discussing barriers to implementing a delivery and care model recommended by national and international guidelines. The theme of insufficient professionals and human resources in the SUS permeated the discussions on reception, risk classification, environment, and the necessary demand for more significant material and financial resources for the SUS.

One of the effects when presenting and debating the evaluation results systematized by guidelines, devices, and verification items enabled to visualize from two perspectives the level of implementation of good practices in delivery and birth care in a state matrix, with its main positive or negative highlights and their gradations: (i) The set of good practices implemented by service; and (ii) The level of implementation of each guideline and device in the territory (municipality, health region, and state). This territorial analysis favored the reflection of the health secretariats in the implementation of the policy in their territory and inter-institutional cooperation; for example, analyses of the facilities and difficulties in advancing to implement the preferred full-time companion and the reception and risk classification in obstetrics were topics discussed with an intense level of shared responsibility of the services and managers of the health secretariats.

The evaluative results were analyzed with the evaluative ethos that the information produced should not be used as absolute truth but as a negotiation tool between stakeholders and multiple interests, ensuring contextualized analyses dialoguing with the subjects’ interpretations.

The Workshops allowed sharing the difficulties and facilities between service managers with similar characteristics regarding the implementation or not of a specific device, such as skin-to-skin contact and the implications of how to manage and operate in health.
To this end, a report modality facilitating a reflection and the planning of strategies to overcome the main difficulties was proposed. After the Feedback Workshop, the report should be prepared with each institution’s group to list the action plan for the maternity to improve the quality of care and the sustainability of successful practices. These action plans become monitoring instruments for maternity hospitals and the GCE-RC.

Until August 2019, the MS received 278 action plans from 11 states, one-third of the Federative Units and 46% of the maternity units evaluated. The elaboration of these plans was guided by the PNH guidelines and provisions, which aim to reorganize health work processes, centrally proposing transformations in social relationships between workers and managers in their daily experience of organizing and conducting services; transformed production and provision of services to the population; valuing the participation of actors, teamwork, with co-responsibility of managers, workers, and users. We aimed to reflect on the increased workers’ capacity to analyze and intervene in their work processes and the continuous improvement of the quality of care to foster these changes. Adopting the search for health decentralization, mediating between the autonomy of subjects and control of institutions (with its norms and rules), reflecting on the power of an institution to also be a fertile space for constructing strategies that induce workers to use their private space for action in the public interest (of users).

Despite the significant participation of the states and the players involved in the three management spheres, until August 2019, more than half of the states were unable to complete the agreed feedback stages, that is, to send the state action plan to the Ministry of Health. Management changes in state governments and difficulties in agendas for agreeing on these plans at the CIR and CIB may be factors that have delayed the completion of this process. This percentage of delivered action plans by State may point to the difficulty of managers of the three managing spheres to incorporate monitoring and evaluation practices as governance qualification strategies, and indicated that the moment of the Feedback Workshops was not sufficiently mobilizing for reflection and usefulness for the States that were unable to complete the stage of agreeing on the plans and sending them to the Ministry of Health.

An important issue that we could not fail to analyze was the challenge of the governance of health care networks in SUS decision-making bodies, which requires permanent strengthening of the CIR, CIB, and CIT, promoting spaces of consensus through multicentric coordination, negotiation, decision by consensus, cooperation and interdependence, and qualification in the development and use of management tools, among health plans, regional network plans, management contracts, and even maternity action plans.

**Final considerations**

Considering that 68% of Brazilian maternal deaths are still associated with direct obstetric causes and are, therefore, preventable, mainly due to hypertensive and hemorrhagic complications, we can observe that the quality of care is at the heart of the maternal mortality issue in Brazil and points to the challenges of the relationship between the essential components of the health system organization, the qualification strategies, and scientific updating of health professionals. Promoting plural, participatory, and prospective dialogue spaces to improve the quality of health care under the analysis of the regionally organized health system conditions refers to the underlying principles and guidelines of the SUS. This premise permeates the methodological design of the evaluation process, in line with the scientific recommendations for good practices in delivery and birth care.

Incorporating new health care based on scientific evidence and ensuring rights in obstetric and neonatal care requires systematic, periodic, evaluative visits, analytical moments, and group reflection on the results found and monitoring and evaluating the action plans of the services. Thus, new cycles and processes for monitoring and evaluating obstetric and neonatal care incorporated into health services and institutions’ routines are expected. Expanding the evaluation scope for urgent situations and obstetric emergencies and the leading causes of maternal and neonatal morbimortality is also expected. It is also necessary to increase social control representations, for example, health councils, and the women’s movement as sources of information on the evaluation process and subjects of transformation, through participation in workshops on the delivery and birth care results.

PHC representatives sharing with specialized services enabled spaces for group analysis with the potential to define unique and more effec-
tive strategies. Thus, this experience is expected to expand, with encouragement to participation and representatives of specialized services (maternities, normal birth centers - CPN) in PHC assessment within obstetric and neonatal care. Henceforth, international health systems are strategic for the achievement of positive results, the implementation of a computerized system of clinical care during pregnancy, delivery, birth, and the puerperium, allowing more horizontal, timely, institutional, and clinical communication according to the health needs.

Finally, we emphasize the importance of SUS management bodies in valuing health professionals and managers’ interest for the implementation of more sustainable strategies, to include and secure monitoring and evaluation in and between services.

Collaborations

LBRAA Silva, A Angulo-Tuesta, MTR Massari, LCR Augusto, LLM Gonçalves, CKRT Silva and NP Minoia participated in the conception, planning, and data analysis, the writing or critical review of the final version, and the final approval of the version to be published. They are jointly responsible for all aspects of the work in ensuring the accuracy and integrity of its content.

References

2. Leal MC, Pereira APE, Domingues RMSM, Theme Filha MM, Dias MAB, Nakamura-Pereira M, Bastos MH, Gama SGN. Intervenções obstétricas durante o trabalho de parto e parto em mulheres brasileiras de risco habitual. Cad Saúde Pública 2014; 30(Supl. 1):s17-s32.
42. Mendes EV. Comentários sobre as Redes de Atenção à Saúde no SUS. Saúde Debate 2014; 52:38-49.