

India's Thayi Bhagya Yojana Scheme

Secondary Case Study

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Context

In the early 2000s, Karnataka State in India faced an acute shortage of specialists needed for safe delivery and emergency obstetric care—especially gynecologists, anesthetists, and pediatricians—within its public health system (Singh & Chavali, 2012). This presented an urgent lack of access to care especially for women living below the poverty line and those who were members of Scheduled Castes and Tribes. At the same time, Karnataka’s private health sector had a considerable number of such specialists working in private hospitals; however, the out-of-pocket costs associated with private hospital care presented significant cost barriers to economically vulnerable women (Singh & Chavali, 2012).

This context prompted the Karnataka State government to explore ways to increase institutional delivery rates of poor and tribal women by increasing access to institutional delivery care and ameliorating its associated costs across both the public and private sectors. In 2009, the state government launched a program that included four components: first, the *Janani Suraksha Yojana*, a national safe motherhood program, encouraged public sector institutional deliveries by providing financial incentives to below-poverty-line (BPL) mothers. Second, *Pasooti Araike* provided cash assistance to pregnant mothers to improve nutrition and access to antenatal care. Third, the *Madilu* program provided free delivery kits—including items such as blankets and mosquito nets—to BPL women who delivered in public health facilities (Mohanani et al., 2016).

The last component of the program was *Thayi Bhagya Yojana* (TBY), a scheme nearly identical to the *Chiranjeevi Yojana* program in Gujarat State that was launched in 2006. Under TBY, implementing district governments entered into a partnership with public and private hospitals with the objective of providing poor and tribal women access to free obstetric care services, with an ultimate goal of increasing the proportion of institutional deliveries and reducing maternal and infant mortality rates (Mohanani et al., 2016).

This case study explores the implementation and results of TBY, including whether and how it achieved its intended outcomes and the factors that may have helped or hindered the success of this public-private engagement (PPE). While the TBY scheme included participation from both public and private hospitals, for the purposes of this case study we focus only on private health sector involvement. The remainder of the case study is organized into the following sections: Methods; Approach; Results; Key Success Factors; and Discussion.

Methods

This case study is one of six developed for the Strengthening Mixed Health Systems (SMHS) project that presents analysis from existing evaluations of public-private engagements for health and new interviews and review of the data. The secondary case data collection and analysis for all six cases uses both existing research and supplemental primary data collection to answer the questions: (1) is there evidence that this public private engagement (PPE) is associated with improved outcomes, and (2) what factors are associated with helping and/or hindering the success of the engagement. After identifying the PPEs for these case studies, we undertook a structured search of the literature to compile existing peer-reviewed and grey literature about the PPE that would help us to answer the above questions. In addition, we attempted to interview researchers of PPE evaluations and PPE implementers/partners, when they could be identified, to collect supplementary data on the two questions. The resulting documents and transcripts were then coded and analyzed using a set of closed codes centering on four themes: PPE context and background, theory of change, process evaluation results (activities, outputs, and outcomes), and helping/hindering factors. The qualitative analysis of the process evaluation results and factors coding is presented in the Results section of the case study. For the factor coding specifically, we utilized a set of codes designed based on the PPE Factor Ecosystem that was developed as part of the SMHS project; a description of the ten factors is included in Box 1.

Box 1. PPE Factor Ecosystem

The factors presented in the Results were developed as part of a systematic evidence review conducted by the research team. This review surfaced common factors in the published literature that were cited as playing a role in either helping or hurting the success of PPEs, resulting in the development of a new ecosystem framework. The factors in the ecosystem include Environmental, Structural, and Engagement factors, specifically:

- Environmental – shaping the environment in which a PPE operates (including political, financial, legal and organizational).
- Structural – defining the architecture of a PPE (including engagement models, formality, and resources for engagement).
- Will to engage - the intention, interest, or commitment of individual PPE actor and their institutions to enter and sustain the engagement.
- Trust - the belief that the opposite sector is acting in good faith and has the goodwill and integrity to effectively participate in an engagement.
- Mutual understanding – the understanding of the opposite sector’s capacities, motivations, resources, and role in the health system.
- Communication – the process and approach used by sector partners to exchange information and participate in dialogue.
- Engagement rationale – the basis of and motivation for the engagement.
- Technical and managerial capacities – the capacities of PPE actors related to the technical area of PPE focus as well as project management and joint leadership.
- Accountability – the process and approach used by sector partners to hold one another accountable for carrying out their roles and responsibilities in the PPE.
- Other – while the above types represent factors that emerged from the literature, we allowed for open coding of factors that arose in evaluations, documentation or interviews of the focus PPE that did not otherwise fit into the above categories.

For this case study on TBY, a total of 4 articles were identified, reviewed, and coded. Interviews were conducted with two researcher key informants using a structured interview protocol. Interview transcripts were coded using the same set of closed codes centered around key themes. While these evaluations and interviews provide important insight into the question of helping and hindering factors, it is important to note the limitation that existing studies may not have sought to explicitly measure factors; as such, those identified through the coding of existing evaluations may not provide a fully representative view of the factors that influenced the effectiveness or lack thereof of the engagement.

Approach

Basic information – Thayi Bhagya Yojana

- Geographic focus: Karnataka State (India)
- Timing: launched in 2009
- Primary partners include: Government of Karnataka State (state and district levels); private obstetricians

As described in the introduction of this case study, the TBY scheme had a clear underlying theory of change that was nearly identical to that of Chiranjeevi Yojana in Gujarat: by empaneling private hospitals to provide below-poverty-line and tribal women with access to free obstetric care services, TBY intended to reduce out-of-pocket expenditures and improve access to quality obstetric care by increasing rates of institutional delivery, ultimately improving maternal and child health outcomes (Mohanani et al., 2016).

Management of the TBY scheme took place at state and district levels. At the state level, the Reproductive and Child Health Unit of the Karnataka State Department of Health and Family Welfare had overall responsibility for the scheme, and a state-level committee was formed for monitoring and evaluation as well as provision of guidance and supervision to the implementing districts. At the district level, the District Health Society was responsible for identifying and registering eligible hospitals and managing the day-to-day implementation of the scheme, including data collection and reimbursements for provision of services. (Singh & Chavali, 2012)

In order to empanel private providers, the scheme guidelines stipulated that districts should issue a call for Expressions of Interest from eligible private hospitals, clearly stating the services to be provided and the reimbursement rate. Once interested private providers were found to meet the eligibility criteria, an annual memorandum of understanding between the district government and the provider was to be signed (Singh & Chavali, 2012). Eligibility criteria included a minimum of 10 beds, functional operating and delivery rooms, access to blood banks, and availability of gynecologists, pediatricians, and anesthetists (AHI, 2012; Jayashri, 2015; Mohanani et al., 2016).

Women over the age of 19 from below-poverty-line and tribal families could then access free obstetric care services from the empaneled private providers for their first two live births. The scheme guidelines stated that a small percentage of the scheme's budget in the state should be allocated for awareness-raising activities in target communities, including through workshops. When qualifying women utilized free services under the scheme, the government paid a set rate of INR 3,000 (approximately 60 USD) per delivery—which included coverage for medicines, laboratory investigations, surgical expenses, anesthesia, blood transfusions, immunizations, and use of Newborn Intensive Care Units—regardless of whether the delivery was normal or Caesarian section. Private providers were reimbursed by the district for every 100 deliveries and

were required to pay a small proportion of the reimbursement directly to the beneficiary as a travel allowance (AHI, 2012; Jayashri, 2015; Mohanan et al., 2016).

In 2010-11, the state introduced TBY Plus to the scheme. TBY Plus was a conditional cash transfer program linked with TBY. It was designed to provide additional support and incentive for the utilization of private hospital services under the scheme by providing a cash incentive of INR 1,000 (approximately 20 USD) to poor and tribal women who delivered in private hospitals for their first two live births. To receive this benefit, women were required to submit their private hospital delivery record along with documentation of their below-poverty-line status (AHI, 2012; Mohanan et al., 2016).

Results

Starting in 2009, TBY was rolled out across seven “C” category districts of Karnataka State—a designation based on vulnerability mapping—which included Bagalkote, Bidar, Bijapur, Gulbarga, Yadgiri (which was broken out of Gulbarga as a separate district in 2010), Koppal, and Raichur. The roll-out also included the tribal district of Chamrajnagar (AHI, 2012; Mohanan et al., 2016).

Outputs. Given its structure, there were two key outputs the TBY scheme was designed to produce: first, increasing the number of empaneled private facilities providing free obstetric care services to BPL women; and second, increasing the number of deliveries from BPL women taking place under the scheme.

The implementation of the scheme was largely concentrated in two districts where most provider empanelment and deliveries took place. In TBY’s first year, a total of 89 facilities were empaneled in the implementing districts, 62 of which were private hospitals. The number of participating private facilities plateaued at 76 in 2010-11, dropping to 73 in 2011-12. In 2012, private facilities accounted for approximately 69 percent of the total facilities under the scheme (Singh & Chavali, 2012), and by 2014, there were 88 private providers enrolled in the TBY scheme across all of the implementation districts (Mohanan et al., 2016). The total number of deliveries under the TBY scheme increased by a dramatic 37% from its first year of implementation to the second (from 28,186 deliveries in 2009-10 to 42,582 in 2011-12), but this rate of growth tapered off to a minimal 8.5 percent by the third year (Singh & Chavali, 2012).

It is important to note that while a total of eight districts implemented the TBY scheme, the intensity of implementation across districts varied significantly. The vast majority of implementation occurred in the two districts of Bagalkot and Bijapur: by 2014, approximately 60 percent of empaneled private providers were operating in Bagalkot, with approximately 21 percent in Bijapur (Mohanan et al., 2016). Together, these two districts accounted for 81 percent of 451 memoranda of understanding (MOUs) signed with private providers, and also accounted for 74 percent of deliveries under the scheme (Mohanan et al., 2016). The rest of the empaneled private providers were scattered across the other implementation districts, with the fewest operating in Yadgiri and Koppal (Singh & Chavali, 2012).

Outcomes. Researchers Mohanan et al. conducted an evaluation of the scheme in 2016 to assess whether TBY had achieved its intended outcomes of improved access to quality obstetric care services through increased institutional delivery rates, reduced out of pocket expenditures, and ultimately, improved maternal and child health outcomes. This evaluation was conducted in conjunction with their evaluation of Chiranjeevi Yojana as part of the Collaboration

for Health System Improvement and Impact Evaluation in India (COHESIVE-India)¹. These researchers leveraged the variation in the scheme's implementation intensity across districts, comparing districts with more intensive implementation (Bagalkot and Bijapur) to those with less intensive implementation, including Bidar, Gulbarga, Raichur, and Chamarajanaga (Mohan et al., 2016).

Given that institutional delivery rates were already improving in Karnataka State, TBY did not have a significant impact. Overall, the researchers found that while TBY was associated with a 3.5 percent increase in deliveries at private facilities in Bagalkot and Bijapur—and a small decrease in home deliveries of about 1.5-1.8 percent—the scheme did not have any significant impact on institutional delivery rates or on certain maternal and child health indicators (Mohan et al., 2016). While the literature on TBY is scarce, these findings are generally supported by a rapid assessment of the scheme conducted by Access Health International (AHI) in 2012. This assessment compared institutional delivery rates in TBY's implementation districts with institutional delivery rates for Karnataka State as a whole, both prior to and during implementation of the scheme. They found that prior to the scheme, some TBY districts lagged behind state-wide institutional delivery rates, but by 2012 the TBY districts had made some progress in closing this gap (Singh & Chavali, 2012).

However, institutional delivery rates were already dramatically increasing across Karnataka State as a whole. The proportion of institutional deliveries in TBY districts improved from 67 percent in 2008-09 to 94 percent in 2011-12; during the same time period, the state-level institutional delivery rate increased from 72 to 96 percent. While TBY implementation districts may have experienced a slightly faster rate of increase compared to the rest of the state, it remains unclear how much of this improvement can be attributed to TBY alone. (Singh & Chavali, 2012)

Intensive implementation of the scheme was associated with slight reduction of out-of-pocket expenditure, but only in two districts. In terms of other outcomes, Mohan et al. found that that intensive implementation of the scheme led to small reductions in out-of-pocket expenditures (approximately INR 200) for households living in high-intensity TBY districts (Mohan et al., 2016). While implementation of TBY may have helped to reduce out-of-pocket expenditures, there is some additional evidence that poor and tribal women still did not experience cashless deliveries under the scheme, as had been envisioned by the state. For example, an exploratory study of user experiences with state insurance schemes in Karnataka State found that, of a small sample of women interviewed, none had experienced a free delivery despite being beneficiaries of the TBY scheme (Kilaru et al., 2013).

There existing evidence has significant limitations, including a lack of evidence on quality of care. There are several additional limitations related to evaluation of the TBY scheme's outcomes. First, while it was implicit in the scheme design that improved institutional delivery rates would increase access to quality obstetric care services, the quality of services provided by empaneled private facilities has not been evaluated, nor were maternal and neonatal health outcomes. Second, as described above, implementation of TBY was uneven across the involved districts, with the majority of implementation taking place in only two of eight target districts. Any positive effects detected in the evaluation were therefore limited to the two intensive-implementation districts. Finally, since TBY was part of a multi-component program that included significant investment of resources in these communities—including cash assistance and safe delivery kits—it is difficult to attribute any improved outcomes to the TBY scheme alone.

In addition, when considering the outputs and outcomes of the TBY scheme, it is important to consider the actual contribution of the empaneled private hospitals. By 2012, private hospitals

¹ Note that the six secondary case studies conducted for the SMHS project include one that focuses on Chiranjeevi Yojana.

accounted for 42 percent of deliveries under the scheme. This figure shows their relatively low levels of active participation in the scheme: while private hospitals accounted for 69 percent of empaneled facilities that year, they were responsible for less than half of the scheme's deliveries (Singh & Chavali, 2012). This could indicate that any positive outcomes attributable to the scheme may have been driven in larger part by empaneled public providers.

Given this and the available evidence, it remains unclear if TBY was successful in increasing institutional delivery rates, reducing out-of-pocket expenditures, and improving maternal and child health outcomes for poor and tribal women in Karnataka State.

Key Success Factors

The available evidence highlights a number of factors that constitute areas for improvement in the scheme and may have hindered its success. These included factors related to the structure of the scheme; mutual understanding between public and private sector actors about the scheme; the technical and managerial capacities of sector actors; and accountability.

Scheme structure. Some of the most frequently cited factors in the literature on TBY related to its pricing and reimbursement model. First, the reimbursement model adopted by the scheme was capitation-based, with a set reimbursement paid to empaneled private providers after every 100 deliveries for all services provided regardless of whether those deliveries were normal (vaginal) or Caesarian section (Singh & Chavali, 2012). At INR 3,000 (USD 60) per delivery, TBY's reimbursement rate was higher than some other similar schemes in India, including Chiranjeevi Yojana; however, this level of reimbursement was likely too low relative to the cost of services (Mohanani et al., 2016). In Karnataka State, Caesarian section rates tend to be higher in private hospitals due to greater resources and the fact that they often serve as referral centers, frequently causing delivery services to be more expensive (Singh & Chavali, 2012).

An exploratory study that included key informant interviews with private providers who participated in the scheme found that they complained both about the scheme's capitation model of payment and its low reimbursement rate (Kilaru et al., 2013). In their rapid assessment, Access Health International found that these problems with the pricing and reimbursement model made the scheme financially unappealing or unsustainable for some private providers, especially those with higher Caesarian section rates, resulting in attrition from the scheme. Given this, Access Health International recommended modifications to the model including more frequent reimbursement to increase the provision of working capital to private providers under the scheme, especially smaller hospitals (Singh & Chavali, 2012).

In addition to these issues with the pricing and reimbursement model, other hindering factors emerged related to the contracting process between the district governments and private providers. In their evaluation, Mohanani et al. found that effective, transparent mechanisms of contracting with private providers needed to be piloted and developed to prevent abuse or fraud within the scheme, given that the scheme's beneficiaries likely did not experience cashless deliveries as had been originally envisioned. They also found that the scheme's contracting mechanisms or MOUs did not include any explicit focus on the quality of care provided, highlighting the possibility that low quality of care could impede the scheme's ultimate impact. (Mohanani et al., 2016)

Private provider communication and understanding. As described in the theory of change section, the scheme guidelines stipulated that districts were to invite Expressions of Interest from private hospitals, clearly listing the services to be provided and the reimbursement rate. In

practice, however, districts took different approaches to communication and inviting interest in the scheme. For example, in two districts including Bagalkote where the majority of implementation took place, district officials instead convened a meeting with eligible private hospitals to explain the scheme and subsequently invited applications for MOUs. (Singh & Chavali, 2012)

Interestingly, Mohanan et al. also found evidence that private providers in Karnataka State lacked a clear understanding of the TBY program overall. Their study included key informant interviews with a sample of private providers from TBY districts to assess provider awareness and perceptions of the scheme. They found that while providers in high-intensity districts were most likely to report being aware of the scheme, over half of sampled providers in non-TBY districts also reported knowing about TBY, and a significant percentage reported being empaneled even when TBY was not implemented in their districts. Knowledge of the individual components of the TBY umbrella program was also comparable across high-intensity districts, low-intensity districts, and non-TBY districts, suggesting that private providers lacked a clear understanding of the program and how to best leverage it for their patients. (Mohanan et al., 2016)

Technical & managerial capacities. Across the literature, the most frequently raised critique of TBY is that the state and district-level governments lacked efficient monitoring mechanisms, data analysis, and evaluation of the scheme, as well as capacity for effective contract management. First, data collected from private providers under the scheme lacked comprehensiveness: it was limited to the number of deliveries performed and disaggregated by delivery and population type, but there was no data collection on delivery of other services intended to be provided free of charge to the beneficiaries (e.g., medicines, lab investigations, blood transfusions, and NICU usage) (Singh & Chavali, 2012). Data collection from participating providers was also paper-based rather than electronic, resulting in limited transparency (Singh & Chavali, 2012) and potentially prone to human error and other discrepancies as it was compiled at district and state levels (Jayashri, 2015). Further, there was little analysis of the data collected from participating providers at district or state levels, and the scheme lacked a budget for periodic evaluation of its performance despite monitoring and evaluation being one of the responsibilities of the state-level committee (AHI, 2012; Jayashri, 2015). In addition, the scheme's contracting mechanisms did not explicitly address quality of care. While evidence is limited, it is likely that poor quality care provision in participating private facilities could have hindered the overall impact of the program (Mohanan et al., 2016).

This lack of effective monitoring, data analysis, and evaluation constrained public officials' ability to understand and address the scheme's impact, strengths, and areas for improvement, as well as effectively conduct performance management of participating providers. Without reliable data and analysis, there was little understanding of provider compliance with contractual terms or ability to take disciplinary action, conduct need-based training, or provide feedback on outcomes (AHI, 2012; Mohanan et al., 2016). Further, it appears that state and district governments also had limited capacity for financial management of TBY. While the districts were required to review and reconcile invoices submitted by participating providers against their reported service data, there is no evidence that this reconciliation occurred (AHI, 2012; Jayashri, 2015).

Accountability. Factors related to accountability were also prevalent in the existing literature. While there was no direct evidence of fund leakages occurring in the available literature, AHI recommended improvements in the financial management of the scheme on the side of the public sector, including reporting and accountability to avoid scheme leakages at the district level, based on the findings of their rapid assessment (Singh & Chavali, 2012).

Related to the participating private providers, there is some evidence of potential fraud and misuse of the scheme. Mohanan et al. found that despite the fact that the state government compensated private practitioners for services provided, there was no significant correlating reduction in out-of-pocket expenditures for institutional delivery. While there is no definitive

evidence of corruption in the literature, this indicates the possibility that private providers would collect reimbursements from the government and continue to inappropriately bill patients for services (Mohanani et al., 2016). Another study also found that private hospitals may have viewed the TBY scheme as a source of funds and concluded that further analysis of possible fraud and misuse of the scheme is needed (Kilaru et al., 2013).

Uptake by intended beneficiaries. Finally, evidence from an exploratory study reveals low uptake of the TBY scheme by poor and tribal women, with this low level of popularity potentially driven by lack of knowledge. In addition, this study also made reference to the requirement of a “Thayi card” or “ANC card” (antenatal care card) that women were required to possess in order to prove their eligibility to benefit from the scheme, inferring that this requirement was a barrier to utilization. Other deterrents to utilization that were identified included transportation costs and other out-of-pocket expenditures related to private delivery services (Kilaru et al., 2013).

Discussion

Overall, the evidence indicates limited success for *Thayi Bhagya Yojana*: while there is some evidence of limited impact on institutional delivery rates and out-of-pocket expenditures in the two high-intensity implementation districts, it is unclear what improvement can be attributed to TBY alone, and what is attributable to TBY’s broader umbrella program or overarching increases in institutional delivery rates across Karnataka State at the time. There is also no evidence that TBY contributed to improved maternal or neonatal health outcomes. Factors that may have hindered the success of the TBY scheme—including the pricing and reimbursement model, ineffective contracting and monitoring mechanisms, accountability issues, and lack of beneficiary uptake—are similar to factors and the interrelationships between them identified in Gujarat’s *Chiranjeevi Yojana* program, further validating their importance given the parallels between the two schemes.

When designing PPE, consider interrelationships between factors, especially related to structural factors. Structural factors related to the scheme’s design—particularly the pricing and reimbursement model—had significant implications for both the engagement rationale of private providers and their accountability under the scheme. The scheme’s low reimbursement rate hindered its ability to attract and retain providers, as a lack of financial appeal or sustainability drove attrition from the scheme especially for providers that offered more expensive advanced services. For providers that participated in the program, the lack of significant reduction in out-of-pocket expenses for scheme beneficiaries implies that the pricing model undermined their adherence to the terms of the scheme, as some likely shifted costs onto their patients rather than offering free services. A lack of effective monitoring and accountability mechanisms—as well as the lack of a robust contracting process—may have further contributed to potential fraud and misuse of the scheme.

While fraud and abuse of the scheme is possible, it is also interesting to note Mohanani et al.’s findings around private providers’ lack of general understanding of the TBY scheme across implementing districts. While there is no concrete evidence about the drivers of this lack of understanding, one hypothesis relates to variation in communication about the scheme between private providers and the state and district governments, as well as the uneven implementation process across districts. Whether or not variation in communication and implementation approaches across districts contributed to a lack of understanding, it remains evident that private providers lacked clear knowledge about the scheme, including how to utilize it for the benefit of their patients.

PPE for health service delivery should maintain a focus on the quality of services provided. Issues related to scheme’s structure and the state’s capacities for monitoring and performance management are also apparent when it comes to quality of care. As mentioned in the results section, TBY’s contracting mechanisms did not include any explicit mention of service quality. Evidence is limited given that quality of care under the scheme was not explicitly evaluated, but it is likely that gaps in quality of care existed in Karnataka’s private sector. This suggests that, even if the program was successful in increasing institutional delivery rates, impact on maternal and neonatal health outcomes may have been limited. This calls attention to the importance of including quality of care as a central focus in such public-private engagements, including in performance contracts, and establishing appropriate accreditation requirements and monitoring mechanisms to ensure adherence to standards. The importance of including periodic evaluation of such schemes—including evaluation of quality of care—should not be overlooked.

Intended beneficiaries should be a central focus of PPE design. On the demand side, TBY did not fully address barriers to institutional delivery faced by poor and tribal women, including transport, nor did it fully ameliorate cost barriers. Further, the program’s reliance on Thai or ANC cards created additional barriers to uptake and utilization, indicating the importance of including community and beneficiary voices in the design and implementation of PPEs, especially those intended to benefit vulnerable populations.

Subnational variation in PPE implementation can offer valuable future research. Finally, the evidence reviewed for this case study reveals a high level of disparity in TBY’s implementation, with wide variations in implementation and uptake of the scheme across its target districts. While the drivers of this variation are unclear, exploration of the specific factors that came into play in more or less successful districts could be an interesting area of future research.

There is value in sharing PPE experiences, especially across similar approaches and contexts. The similarities between TBY and Chiranjeevi Yojana—as nearly identical schemes implemented in two states in India during a similar timeframe—point to the importance of sharing of experiences and lessons related to public-private engagement, both within national contexts and more broadly. Though TBY’s launch came three years after Chiranjeevi Yojana’s, their similarities in design, outcomes, and hindering factors point to the value of learning and iterating from successes and challenges in public-private engagement.

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This case study is one of a series of six secondary cases written for the Strengthening Mixed Health Systems program, analyzing the factors helping and hindering the effectiveness of public-private engagements for health in low- and middle-income countries. All case studies, as well as a report presenting cross-cutting findings, can be found on the Strengthening Mixed Health Systems project website.

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