Response to the NHA Consultation Paper on the Unified Health Interface

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Introduction 1

Q 2. What benefits and risks do you see if an open network approach to digital health services is implemented? Please respond with details. 2

Q 9. Are there any challenges to the proposed approach to pricing of services detailed in section 5.1.3.2? Please suggest other alternate pricing models that must be supported by the Gateway. 4

Q 15. Please share your views on the duration for which NDHM should manage and govern the UHI gateway, and if NDHM should open the path to multiple gateways. Please provide details on the benefits and risks of the options. 6

A concern regarding clause 3.5 of the Consultation Paper “Trust and Privacy in UHI and UHI Network”, pertaining to data use and privacy 8

Introduction

The creation of the Unified Health Interface (UHI) as an "open, interoperable health services network for patients, doctors and (health) facilities" is certainly game-changing. By creating the technological foundation which ensures that "a digital health service can be delivered between any end user application with any health service provider" in its network ecosystem, the UHI aims to provide an enabling environment for the flourishing of health service innovation where neither patients nor health service providers will find themselves at the mercy of gatekeeper platforms. To put it simply, the UHI intends to replicate the Unified Payments Interface (UPI) in the health services domain.

IT for Change appreciates the National Health Authority's initiative in setting up the UHI, as digital public good creation in the health sector is a critical imperative. However, it is equally vital that the governance of the UHI be strengthened at an early stage, as the blueprint is laid out.

Proceeding from this starting point, our comments largely revolve around identifying broad directions for putting in place institutional checks and balances to govern the use of UHI. In making these recommendations, we draw upon lessons learned from previous experiences with the roll-out of the Unified Payment Interface (UPI) to address market capture of digital public goods by powerful platform behemoths. We also allude to comparable debates in market concentration and e-commerce regulation.

In the sections below, we have grouped our problem analysis and recommendations based on the question schema outlined in the Consultation Paper.

Our overall recommendations are as follows:

1. The National Digital Health Mission (NDHM) must adopt appropriate safeguards and prescribe clear guidelines for access to, and use of, the UHI in the development of digital health services. These measures are necessary to prevent private capture by dominant platform companies of the benefits of public digital health infrastructure.

2. A tiered pricing model for the usage of the UHI must be put in place. This model must distinguish between public sector agencies, non-profit entities, digital start-ups in the domestic health services sector, and large gatekeeper platforms.

3. NDHM must continue to govern the UHI in the long term and parallel private sector gateways should not be created in order to prevent the risk of a closed platform ecosystem from re-emerging in the health services sector.

4. Clear guidelines and rules must be established to govern the use and re-use of aggregate and personal data being generated through the applications in the UHI ecosystem – including but not limited to the personal data protection framework

Q 2. What benefits and risks do you see if an open network approach to digital health services is implemented? Please respond with details.

Problem Analysis

The Consultation Paper recognizes that the UHI can "lay the foundation of a more open, efficient marketplace, where demand and supply for these [digital health] services can be matched seamlessly with minimal information asymmetry". Open networks are critical to ensuring the neutrality of underlying protocols for access to various building blocks offered by the National Digital Health Ecosystem (NDHE). They also offer a more desirable form of market ecosystem than one that is enabled by the closed ecosystems of private platforms.

However, **unrestricted access to the UHI may also have adverse effects on the digital healthcare market, potentially enabling its dominance by a few market players.** This scenario has already unfolded in the digital payments space, reflecting in the market share of third-party application providers (TPAPs) enabled by UPI. Despite intentions to democratize the digital payments market, the market share of UPI transactions has been skewed towards a limited number of platforms. **As of July 2021, four platforms have amassed approximately 92% of the UPI transaction market share, with platforms operated by large multinational corporations (Google Pay [G-Pay] and PhonePe) capturing more than 80% of all transactions.**[1] Capitalizing the openness of the protocols and network architecture of the UPI, platforms with large existing user bases have been able to quickly assume a dominant position in the market, expanding their access to transactions data that yield valuable customer insight and re-using data to offer other

1 https://gadgets.ndtv.com/apps/news/phonepe-google-pay-amazon-whatsapp-upi-transactions-volume-value-growth-june-2021-npci-2481502

services/applications, cementing their positions of dominance. **As a response to concentration of UPI transaction market share, the National Payment Corporation of India (NPCI) recently instituted a cap of 30% of UPI transactions, giving payment service providers until 2024 to comply.**[2] However, a number of experts have highlighted potential challenges associated with the technical implementation of such a curb, especially since these steps are being taken 'post facto'.[3]

In the case of the UHI, a similar scenario is likely to play out in the absence of clear rules of access. Moreover, the problem may be exacerbated by the significant value offered by healthcare platforms and the projected long-term growth of digital healthcare. As companies such as Google[4] and Apple[5] also look to enter the potentially lucrative space, they will likely seek to use infrastructure such as the UHI to expand on the features they offer their users. For example, it is possible that Facebook-owned WhatsApp would seek to integrate telemedicine services into their product in the long term (similar to payments). This would cement its position as a 'super app' similar to the Chinese platform, WeChat, to the detriment of local innovators.

Recommendations

The National Health Authority must institute safeguards that will prevent a platform oligopoly from emerging on top of the UHI network ecosystem.

- One strategy could be the **establishment of preemptive caps on market share**, whereby apps using the UHI may be allowed to expand their market share only up to a certain level and no further.
- Another strategy could be to determine **rules for guiding the development of health services** on top of the UHI network. For certain health services, there may be a stipulation that private platforms are eligible only if they apply in partnership with a public entity and subject to technology transfer conditionalities after operating for a certain number of years.
- New regulations for Foreign Direct Investment (FDI) in digital health services will need to be instituted, including **additional scrutiny for permitting apps to be developed**

2 https://www.npci.org.in/PDF/npci/upi/circular/2021/standard-operating-procedure-sop%E2%80%93market-share-cap-for-third-party-application-providers-tpap.pdf
3 https://www.business-standard.com/article/economy-policy/npci-puts-cap-on-third-party-apps-share-of-upi-transactions-starting-jan-1-120110501999_1.html
4 https://health.google/
5 https://www.apple.com/in/newsroom/2021/06/apple-advances-personal-health-by-introducing-secure-sharing-and-new-insights/

on the NDHE ecosystem by such foreign players, in order to ensure that a publicly provisioned network infrastructure is not captured and monopolized by private capital. Such a step would be in keeping with measures previously taken in the context of the Goods and Services Tax Network (GSTN) Suvidha Providers ecosystem. In this case, access to APIs is restricted to companies registered in India, public sector entities, and partnerships registered with the government.[6]

- Given the nascent stage of platform regulation and digital health services in India, **data access conditionalities must be put in place** for creating apps on the UHI network. For example, technology service providers deploying the UHI may be required to share high-value data sets that they collect through the end user applications they deploy, in line with the recommendations of the Expert Committee on Non-Personal Data constituted by the Ministry of Electronics and Information Technology (MeitY). Such steps will seek to curb potential monopolization of the UHI by a few players, while helping NDHM realize its vision of a vibrant market for the delivery of healthcare services.

Q 9. Are there any challenges to the proposed approach to pricing of services detailed in section 5.1.3.2? Please suggest other alternate pricing models that must be supported by the Gateway

Problem Analysis

The Consultation Paper notes that the total price associated with access to a particular service will be the sum of charges by the Healthcare Service Provider (HSP), End-User Application (EUA), and the UHI gateway. It also notes that initially, "costs of the gateway be kept very low to encourage adoption" (5.3.2).

In establishing a model for the pricing of the UHI gateway use, the NHA may also take into consideration that a number of non-profit and public sector entities could potentially play the role of EUA developers. Tele-medicine platforms such as 'eSanjeevani'[7] operated by the union

6 https://www.legalraasta.com/gst/gst-api-connectors/
7 https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1705358

government, could potentially be replicated by state governments where the need for more contextualized applications is ascertained. This is particularly relevant in the context of healthcare delivery to communities that live at the margins, for which businesses may not find it viable to alter their services. These applications may not only need to be designed for access in different languages, but also for intermediated use by community health workers or other government extension personnel. **Without subsidization, costs associated with using the UHI gateway may be prohibitive for non-profit and public sector entities seeking to implement healthcare delivery services on these platforms**. Furthermore, levying charges for the use of the UHI gateway may force even non-profit and public sector entities involved in EUA development to push costs onto patients, resulting in increased barriers for access to healthcare services and potential exclusions.

To encourage local innovation towards developing EUAs, the NHA may also consider that existing large technology platform providers have a significantly higher capacity to absorb costs like the UHI gateway price. With the understanding that short term losses may be made up through on-boarding users in the long term (as a means of leveraging 'network effects'), global technology platforms often offer discounted services to users as a means of capturing large parts of the market, before gradually phasing these discounts out. For example, Google's ability to offer 'cashback offers' as part of the use of G-Pay creates a significant hurdle to achieving an equitable playing field for creating UPI-operated applications. Appropriate measures, therefore, need to be instituted to ease the cost of operations for smaller players in the nascent domestic digital product ecosystem, such as instituting rules that create some form of checks and balances to prevent the predatory market practices of dominant platforms.

Recommendations

Given the potential for public and non-profit organizations to fill critical gaps in the delivery of healthcare that may not be viable from a business perspective, it is **recommended that NHA implement a tiered pricing model for access to the UHI gateway that exempts non-profit and public sector agencies from usage costs.** In addition, gateway prices may be differentiated for smaller private platforms and large, dominant platforms in order to prevent market capture.

In determining which type of platform is classified as 'dominant' and to be subject to higher charges for the usage of the UHI gateway, a leaf may be taken out of the European Commission's proposed Digital Markets Act, 2020 that specifically targets 'gatekeeper platforms'.[8] The Act defines a 'gatekeeper' platform entity as one which satisfies the following criteria: "(a) it has a significant impact on the internal market; (b) it operates a core platform service which serves as an important gateway for business users to reach end users; and (c) it enjoys an entrenched and durable position in its operations or it is foreseeable that it will enjoy such a position in the near future".

Q 15. Please share your views on the duration for which NDHM should manage and govern the UHI gateway, and if NDHM should open the path to multiple gateways. Please provide details on the benefits and risks of the options.

Problem Analysis

The Consultation Paper notes that "scaling to multiple gateways, if deemed necessary, would be easier once the initial versions are stable and proven" (6.2.1). The caution being applied by NDHM in scaling up the digital health infrastructure prematurely is laudable. However, **the future creation of additional gateways that may not be managed by the government is not an advisable option,** going by the issues that have emerged in the New Umbrella Entities (NUEs) in the context of UPI.[9]

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[8] https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en

[9] https://www.livemint.com/news/india/rbi-extends-application-deadline-umbrella-entity-for-retail-payments-11614336430975.html

As currently envisaged, the UHI will play the role of a foundational digital infrastructure in delivering digital health services. In order to remain true to its vision of facilitating a diverse and competitive market for EUAs in healthcare delivery**, the UHI must continue to be provisioned as a digital public good by the state**. As civil society organizations and trade unions have highlighted in a recent representation against the granting of the NUE license to Amazon, "infrastructures are one of society's richest mines of data, and access of MNCs to such a data mine would compromise India's data sovereignty".[10] Creating separate UHI gateways that may be operated on a for-profit basis has the potential to lead to the development of digital infrastructure that may exist outside of government oversight, and hence, exempt from the transparency and accountability requirements that bind quasi-state bodies such as the National Payment Corporation of India (NPCI) or NHA. This will make it difficult to regulate overpricing, or other exclusionary practices that may affect citizens adversely if an alternate digital infrastructure were to achieve dominance in the field.

Recommendation

We believe that the contemplation of multiple gateways, including any that may not be operated by the government, is antithetical to the idea that underpins the UHI – since it has the potential to return to a 'closed' platform model. Therefore, it is recommended that **NDHM (or any other designated government entity) continue to manage and govern the UHI gateway for the foreseeable future.** Any other model for opening the path for multiple gateways may be considered in the light of lessons learned from operating the ecosystem for some duration of time. The UHI must be preserved as a foundational digital public good that is accessible to all without the risk of co-option or capture through instituting necessary checks and balances.

[10] https://itforchange.net/sites/default/files/add/Representation-Against-Amazon-Application-NUE-License.pdf

A concern regarding clause 3.5 of the Consultation Paper "Trust and Privacy in UHI and UHI Network", pertaining to data use and privacy

Problem Analysis

The Consultation Paper states that the UHI protocols "will be designed to be privacy preserving and ensure both personal data and business data will not be available to any entity without the explicit consent of the party" (3.5). It goes on to state that "it would not have access to any data on which HSPs / which patients participated in such tele-consultations and ensure privacy is preserved for both Health service providers and patients at all times."

Though the protocol itself may be privacy preserving, it is unclear how personal data protection extends to re-use and subsequent processing of aggregate data generated through the usage of the applications developed on top of the UHI.

Given that patient health records accumulate over the lifetime of the individual and the variety of parties involved in the UHI network that could be interested in different aspects of the health record over time, **it is vital for the UHI to support fine-grained models of health data representation that will allow a patient to provide informed consent at granular levels from within coarse health records.**

There are also aspects of patient data within the UHI that go beyond 'tele-consultation' and even health records. For instance, a) the proposed 'ratings/reputation system' in the UHI involves mandatory disclosure of patient names to HSPs. This could introduce the possibility of retaliation by HSPs and/or negatively impact the patient's future services on the network. Even miscellaneous patient-related information such as their pharmacy or hospital of choice on the network could potentially allow aspects of patient data to be inferred, such as their locality of residence and/or socio-economic attributes. These examples illustrate the importance of a patient-centric approach to data privacy, and putting in place sufficient safeguards around all aspects of patient data.

Recommendation

The personal data protection bill that is pending before Parliament must be urgently enacted preferably prior to the design of the UHI. In the interim, the NHA must come out with clear personal data protection guidelines for the UHI network ecosystem. All technology service providers who are building EUIs on top of the UHI must be bound by stringent guidelines on re-use and re-deployment of aggregate data collected through the applications in the UHI ecosystem in a different context.

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