Part 2

2.4 Healthcare Provider (Optional)

In a decentralized health network, a physician develops their own unique models of healthcare practice to deliver in person or telemedically. A model of practice can be hosted by the original physicians in-person or telemedically, or by joining physicians, who are licensed to authenticate themselves within a region to implement the models of that practice in-person, or telemedically. A joining physician then authenticates their credentials/licensure in the same way as described in section 2.2.

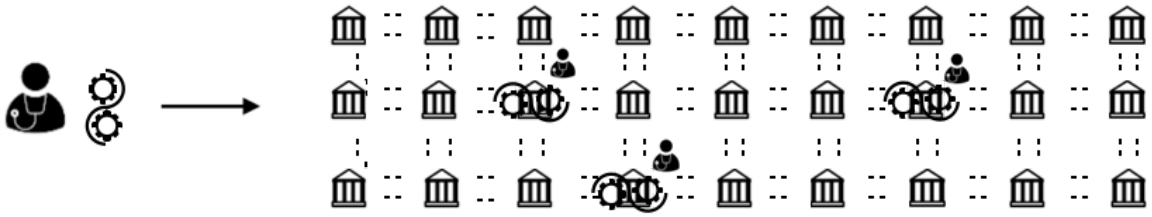

Figure 1 Decentralized models of practice across a distributed layer of facilities

The ability to distribute models of healthcare revitalizes the provider pool with a diverse set of practices as steered by physicians, patients, and their communities. This way, patients get to choose from a variety of preferred healthcare options without being limited by their own geography. Without exportable models of practice, patients become too reliant on individual physicians who can become costly and/or inaccessible. These conditions make it challenging to meet the needs and expectations of healthcare as a public good.

The sovereign setup of healthcare enables provision to develop in diverse and tailored ways by responding to differences in patient localities and nuances of culture, time, and place. Healthcare practice should initially focus on the outpatient/day-case environments, to begin with, with a long-term road map that enables patients to select care (e.g. telerobotic surgery) in any one of multiple locations without displacing themselves, or the physician.

2.2 Facilities (Optional)

In-person care is indispensable to healthcare provision, which means that facilities are important stakeholders to consider in a wider context of decentralized healthcare. Separated as non-institutional entities, we must consider how facilities can be points of centralization. The employment of centralized identity architectures alongside a growing acquisition of health data often accompanies the acquisition of facilities to drive-out competition [6]. As a result, physicians cannot realistically afford to start up their own practices without the facilities to practice in. And those physicians which manage to do well often switch to income-based capital in place of developing scalable and effective practice, which results in the capping of the market population by raising the cost of their services to cope with demand, in part, due to the inability to expand to new facilities (and beyond their own expertise). This reduces access to provision and gears healthcare toward scarcity, rather than a scalable provision which drives the cost of healthcare down. Unfortunately, the current setup results in a trade-off of ingenuity and diversity of available practices within a territory in which ultimately, the patient loses.

One angle to address this monopoly of facilities may be to introduce Harberger taxation to lower the rent - although, incentivizing the most profitable use of a facility when it comes to healthcare provision is another debate (i.e. after all, what economic incentives are there for healthy patients?). Another angle considers that an institution can utilize its

facilities as assets to establish ongoing partnerships with a select group of physicians, and thus drive out the competition from other potential providers. Ultimately, this serves shareholding and renders the ability for patients to set up their own sovereign-based provision useless owing to limited access to other providers.

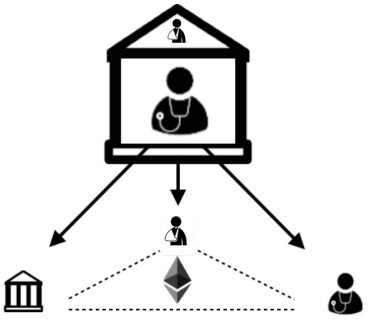

Figure 2 Separating physicians from institutional facilities

Decentralizing the identities of healthcare facilities from physicians and health records can eliminate the ability of entities to utilize their facilities as assets to preferentially block or select professionals from practicing in a region (and thereby acting as an institution). A healthcare facility is a key candidate to consider in a healthcare ecosystem that can assume its own DID in a decentralized health network, allowing the use of facilities to be driven by patients' needs in place of the interests of shareholding and partnerships.

Having readily available access to facilities that respond to the demands of a sovereign setup of healthcare provision, can remove the ability for facilities to form partnerships with a tight group of physicians (thereby acting as an institution). Healthcare facilities (e.g. surgical facilities) assume their own DID to authenticate themselves into a decentralized health network as any other professional entity (e.g. physicians), though many encounters do not require special licensing of a premise to practice (e.g. medical consultations).

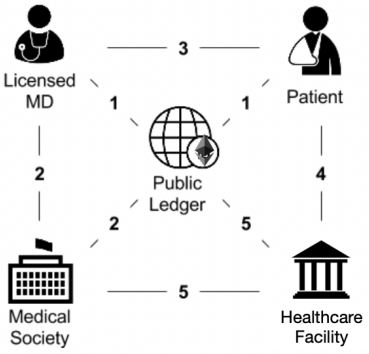

Figure 3

A physician can record a scheduled provision request into the patient's PHR, in response to a patient request, who submits a request for the setup of healthcare on-premise. The physician can verify the licensure of the facilities on-premise using the same authentication architecture as this can be required by facilities for certain practices (surgery, etc). A facility can also confirm a physician license separately with the licensing/credentialing agent for health care to proceed. A facility cannot deny practice on-premise (thereby acting as an institution) to a patient practice request, assuming the status of the physician's credentials is in check. This is designed to work well with joining physicians - as in Figure 1 - to host a practice model within the area. These authentication processes can be automated by the server components of the participants (e.g. patient, facilities) SSST.

Also, the potential for a diversified portfolio of physicians incentivizes interoperable facility development, which can lower the capital risks for physicians to operate their practice models within new regions. This is already true for telemedical provisions as this setup makes the hosting of provisions more cost-effective for facilities, and thus more feasible. By assuming their own DIDs these facilities are incentivized to become interoperable to support a more diversified portfolio of healthcare practice. A diversified portfolio of providers also enables healthcare facilities robustness and immunity to the natural fluctuations of practices within a region.

A patient may set up healthcare at a physician's original facility, or receive telemedical care at a remote facility, to receive their model of healthcare. So long as there is a physician licensed to authenticate themselves within a region to host the model of health care practice selected by the patients, and their communities. This overcomes the limitations in the availability and choice of local provision and enables patients to directly shape the landscapes of their healthcare either individually, or, as a part of their own communities.

References and Further Reading

1. Krawczyk, H., 2001, August. The order of encryption and authentication for protecting communications (or: How secure is SSL?). In *Annual International Cryptology Conference* (pp. 310-331). Springer, Berlin, Heidelberg
2. Samo Burja is the founder of Bismarck Analysis, a consulting firm that investigates the political and institutional landscape of society; a research fellow at the L.N.F.and a senior research fellow in political science at the F.I.T.@samoburja, 2020. Urban politics will always shape national politics. *City Journal*. Available at: https://www.city-journal.org/urban-politics-shape-national-politics [Accessed May 8, 2022].
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