

Transforming Healthcare Organization with Digital Front Door Strategy

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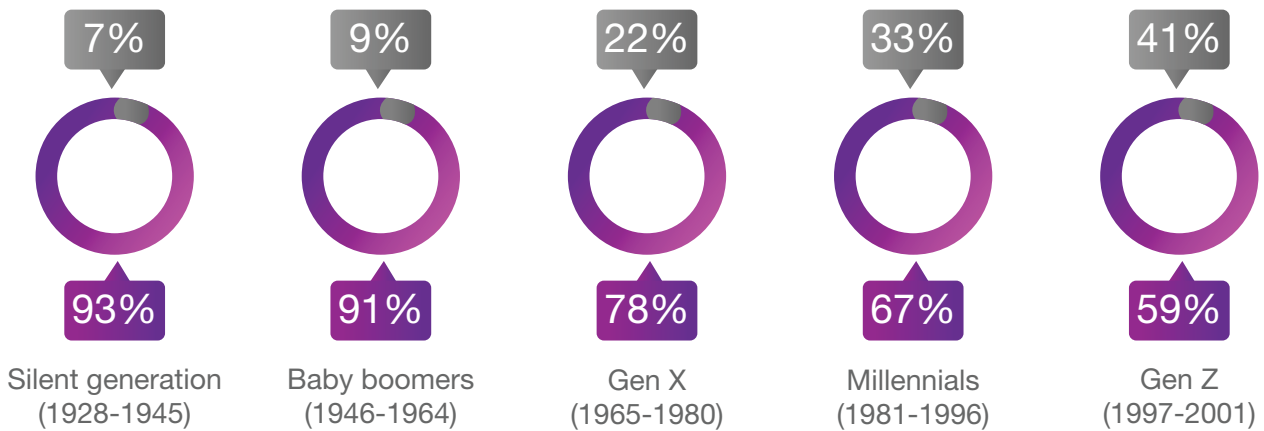
1. Introduction

The current global pandemic has unleashed waves of turbulence across all industries - banking and financial services, manufacturing and automotive, to name a few. However, healthcare is the primary industry that has seen radical reforms and re-alignment of business models and care management to foster integrated care. The healthcare industry is also facing serious challenges in enhancing positive member experience through increased engagement with rising healthcare reimbursements outflows. Healthcare providers at the same time are witnessing increased health assessments, straining the facilities and the associated resources.

Sources mention that in the US, during the pandemic first quarter of 2020, consumer healthcare spending dropped 18%, ambulatory care visits declined 60%, more than 60% of patients mentioned skip the care appointments due to the fear of pandemic, and more than 78% of patients said they would skip at least one medical appointment due to cost pressures^[1].

The survey states that “41% of Gen Z coupled with 33% of millennials would prefer virtual or digital health experience or consultations with medical professional”

Accenture report on digital health consumer survey provides below statistics on virtual health adoption.



Source: Accenture report on 2020 Digital Health Consumer Survey

However, with increased consumerism and healthcare inclusion in the consumerism, there is a need of a solution that warrants the use of digital front door to enable quality care from patient to provider.

2. Healthcare Digital Front Door

Healthcare has evidenced solutions around patient portals and the new feature enhancements around the solution. Analysts research suggest that the patient portal market globally is expected to reach around USD 5.6 billion by 2025^[2], the global healthcare chatbot market around USD 967.7 million by 2025^[3], and the healthcare mobility solutions market around USD 411.8

billion by 2027^[4]. While the portals have enabled the first telehealth consultation and simplified ease of access, the adoption has not yet caught up with the growing need, mainly because of the lack of multiple integration with touchpoints, less consumer personalization, and lack of other care management. This has enabled the healthcare companies and technologists to enable the digital front door that simplifies user care across the below continuum:

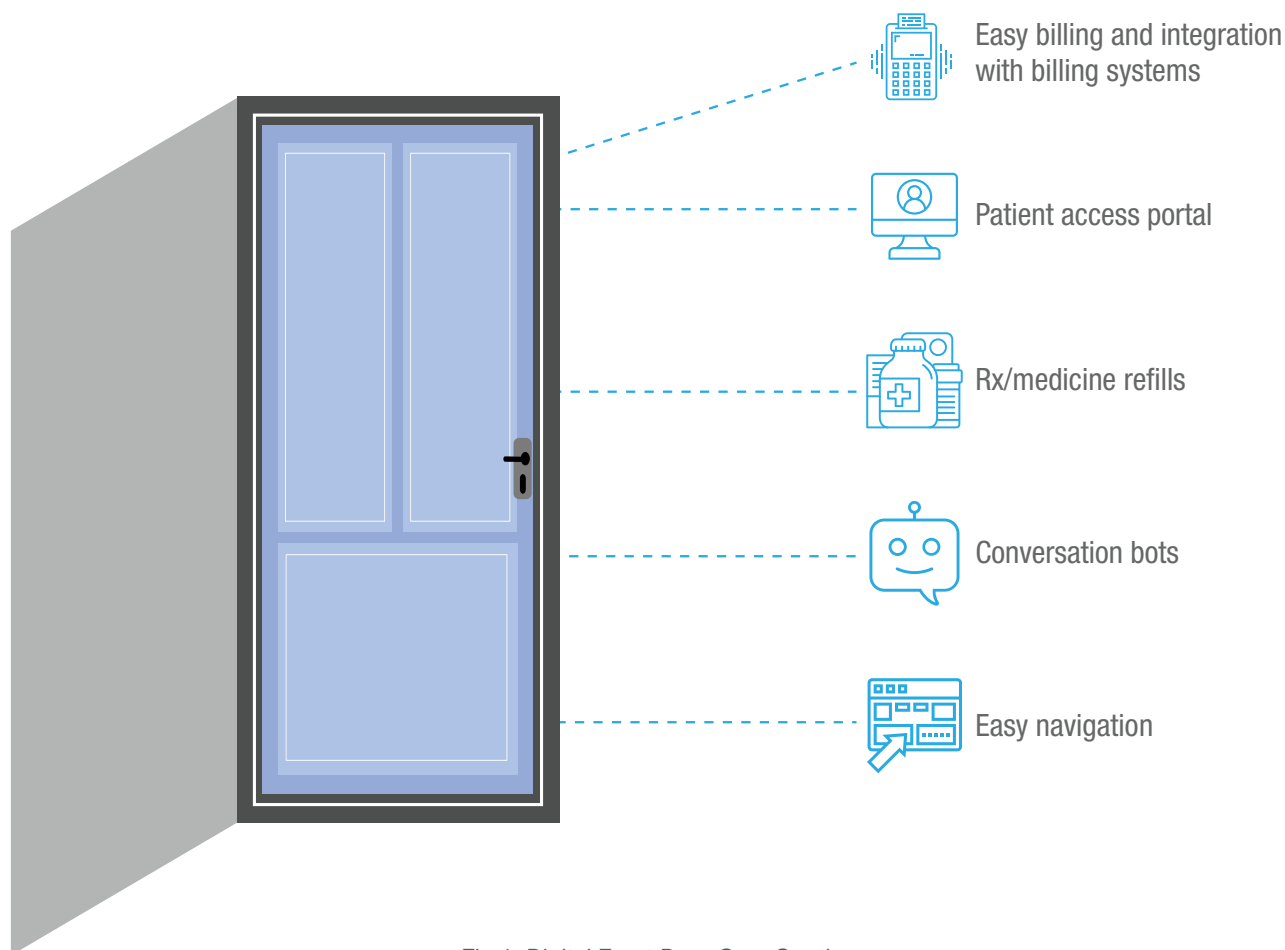


Fig 1: Digital Front Door Care Continuum

The digital front door should center around the frictionless patient experience journey across touchpoints and channels, and build on the existing clinical datasets and applications, to provide a single gateway for the patient medical records. Below are some of the functionalities or target areas that the digital front door offers:

Patient Portal: A single comprehensive portal for digital health appointments scheduling & consultations, medical transport management, medication management, care management, billings (includes finding in-network costs), and bill pay. Some healthcare providers or technology companies working on the digital front door are already exploring other interesting features of enablement of medical transport management by integrating with Lyft, a ride app, that allows patients to book the ride at the time of scheduling the appointment.

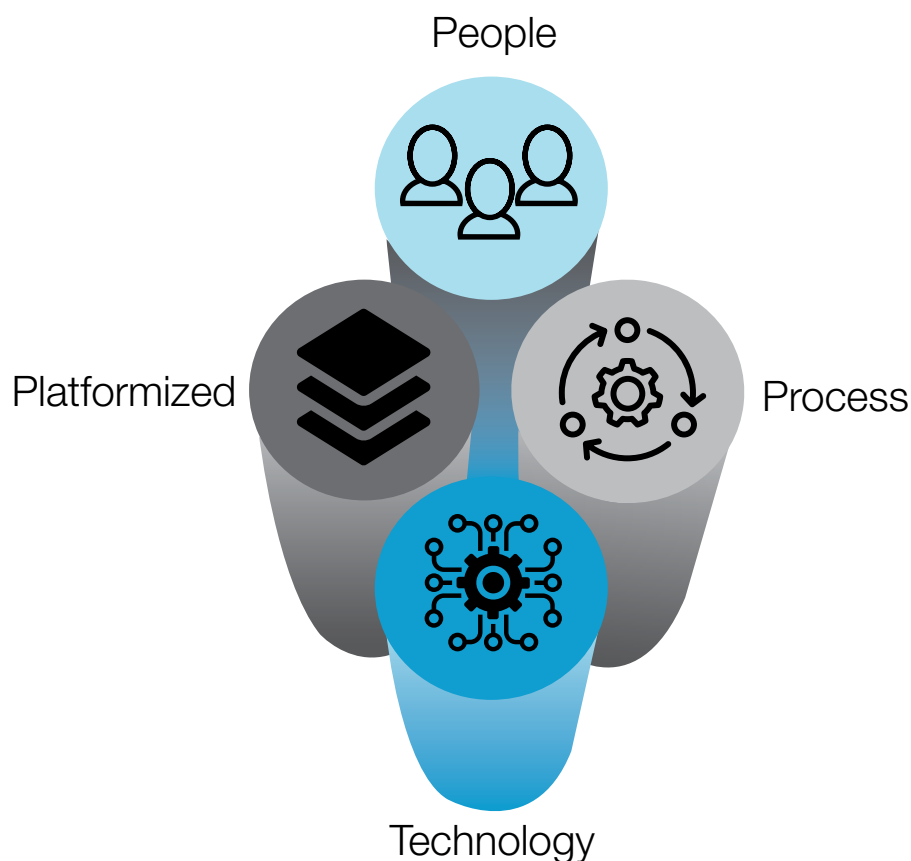
Interoperability: The front door should enable access to all external systems from clinical settings to the connections with pharmacies, laboratory, radiology for setting up procedure appointments, prescribed medications orderings and refills, as well as to extract and enable patient access to health data by connecting with EHR using HIPAA compliance security, diagnosis notes, and treatment follow-ups.

Personalization: The front door should enable hyper-personalization using conversational chatbots and virtual agents to triage the patient symptoms, understand the medical keywords on symptoms and suggest the appropriate physician for appointment booking. This is enabled using a machine learning analytical algorithm that improves the rule data set over time and learns from the increasing number of conversations. So, once the patient logs in, they know their next appointments, follow-ups on medications, and other must-do or good-to-do activities.

Reduced Costs and High Availability: The front door helps healthcare providers to reduce the stress on the critical healthcare infrastructure and physical facilities and helps providers focus on the core business of providing value-based care as the business and payment model shift towards the same. The front door gives 24*7 at ease access to the information and helps connect with care providers. Further, use of the right automation tools and digital technologies help reduce the cost and enhance the care management.

3. Digital Front Door Pillars

The **strategic implementation of digital front door** should focus on below pillars:



People: As mentioned, aligning needs and expectations among key caregivers and care consumers will be the key differentiator in increasing the adoption of the digital front door. The front door should be designed considering the patient at the center of the care management. Patients look forward to engaging with the right caregivers who can help the patients in

the medical treatment journeys, have co-operations and conversations thus enabling the intersection of interactions through technology and human element, offering omni-channel patient engagement and experience. More streamlined and smoothed interactions will increase patient rapport with the providers and boost confidence in the solution.

Process: The solution should emphasize on identifying and prioritizing key processes and then applying the right automation across the touchpoints. Also important is to understand the right hospital or clinical environments on which the solution should render the necessary services. The target care clinics or hospitals should be identified upfront before mapping other processes to create a seamless experience. This is done with alignment of the stakeholders who can start the audit of all the processes and help identify such pivotal processes to understand and establish the end-to-end patient journey.

Technology & Platform: The next step in the strategic implementation is platformizing the solution using the right technology or enabling a pure technology-based solution for enabling the consumers' journey. The platform should have the capability to support the integrated ecosystem of various healthcare services which patients can seamlessly access through preferred channels. The platform should have the capability to enhance and connect with patients in their healthcare journeys across each access and should be robust, secure (HIPAA compliant), scalable, following all the right protocols from end points and integrate the ancillary healthcare systems through open API frameworks to allow access to information and services.

4. Challenges

While the strategy seems sound, it is imperative to note that one of the challenges that the organization faces while trying to implement the digital front door, is support from every stakeholder that is necessary and aligned to be crafted between business and IT. Some of the other challenges that the implementation might pose:

Creating Unified Application: This is a big challenge that persists today. Though with partner APIs, it is now possible to access a multitude of varied systems storing clinical and patient data, we are far away in visualizing and creating a single source of truth to leverage the digital front door. Also, the patient experience is fragmented today with multiple logins to the services or apps. This disparate journey needs to be streamlined and warrants a single sign-on to provide cohesive patient access and experience. Another challenge is to aggregate the services across all channels, applications, and technology platforms in conjunction with offering consumer relevant personalization.

Processes: One of the major challenges is identifying the right processes to be automated or brought under the umbrella of Digital Front door. Right processes that streamline and improve the customer experience journey across touch points must be re-designed, considering patient engagement persona and the extent of hyper-personalization.

Economics of Cost: There is a constant debate between using the varied off-the-shelf solutions available as an individual functionality or build a custom bespoke application. But due cost analysis must be done so that the costs do not shrink the expected benefits realization and reduce the target for healthcare organizations to provide affordable healthcare.

Security: Security poses a great threat in the healthcare industry, especially considering the growing incidents of cybersecurity and data leakages. This becomes a more pressing challenge as the data aggregation is performed for patient's medical records, virtual visits, lab results, and other clinical data. Organizations must implement right user authentication, right data security and integrity, role-based authorization, and consent-based secured access for the provider to access the medical records of patients.

5. Recommended Approach

Considering the strategic pillars and the challenges, a robust approach is necessitated to strategize and implement the digital front door that not only eliminates the patient friction but also ensures that the vision and the strategic objective of the organization are met with necessary and required alignment and transformation. Some of the approaches can be:

- **Organizations** should introspect and draft the blueprint on the vision, the need, and the necessary business KPIs that they are trying to meet, and those KPIs should act as the baseline to measure the progress while implementing Digital Front Door. Some questions the organizations need to consider while deciding the strategic approach include:
 - o How important is cost as a factor? Does cost overweigh the patient experience and satisfaction metric?
 - o Does the solution meet the revenue generation/business development or try to ensure a seamless patient engagement by focusing on operational efficiency?
 - o Does the organization have the necessary IT skillsets and the people who are committed to build the solution with a broader vision?
- **Ensure** all disparate and individual systems are connected and interaction among such systems is built for information flow and analysis. This requires closely working with varied stakeholders across all departments and procuring the necessary stakeholder buy-in and commitment.
- The front door is a conglomeration of various solutions and features; hence the **right selection of development methodology** is important. Also, leveraging microservices architecture rather than the traditional monoliths gives the development team and the product designer greater flexibility in scaling the system and ensuring minimal downtime impact on the entire stack. Also important, is to leverage analytics/AI, automation, and right test frameworks with CI/CD integrations to enhance the development efficiency. The focus should be on scalability, security, flexibility, and reducing TTM (Time-To-Market).

- Organizations should emphasize on **User Experience and Design** to eliminate the current dissatisfaction among the users of digital health solutions, especially the lack of friendliness about patient portals. Right design frameworks should be built to focus on design and the impact on consumer experience. The data from such portals can be used to offer enhanced consumer personalization.
- A key aspect is getting the **staff trained on the product or solution functionality**, channels, the touchpoints, and how to constantly monitor all patient engagement touchpoints.
- **IT skills** and the right technical aptitude is important. Considering the possibility of stakeholder conflict and the availability of right technical skills, organizations should leverage right technology frameworks in their journey to build and implement the digital front door.

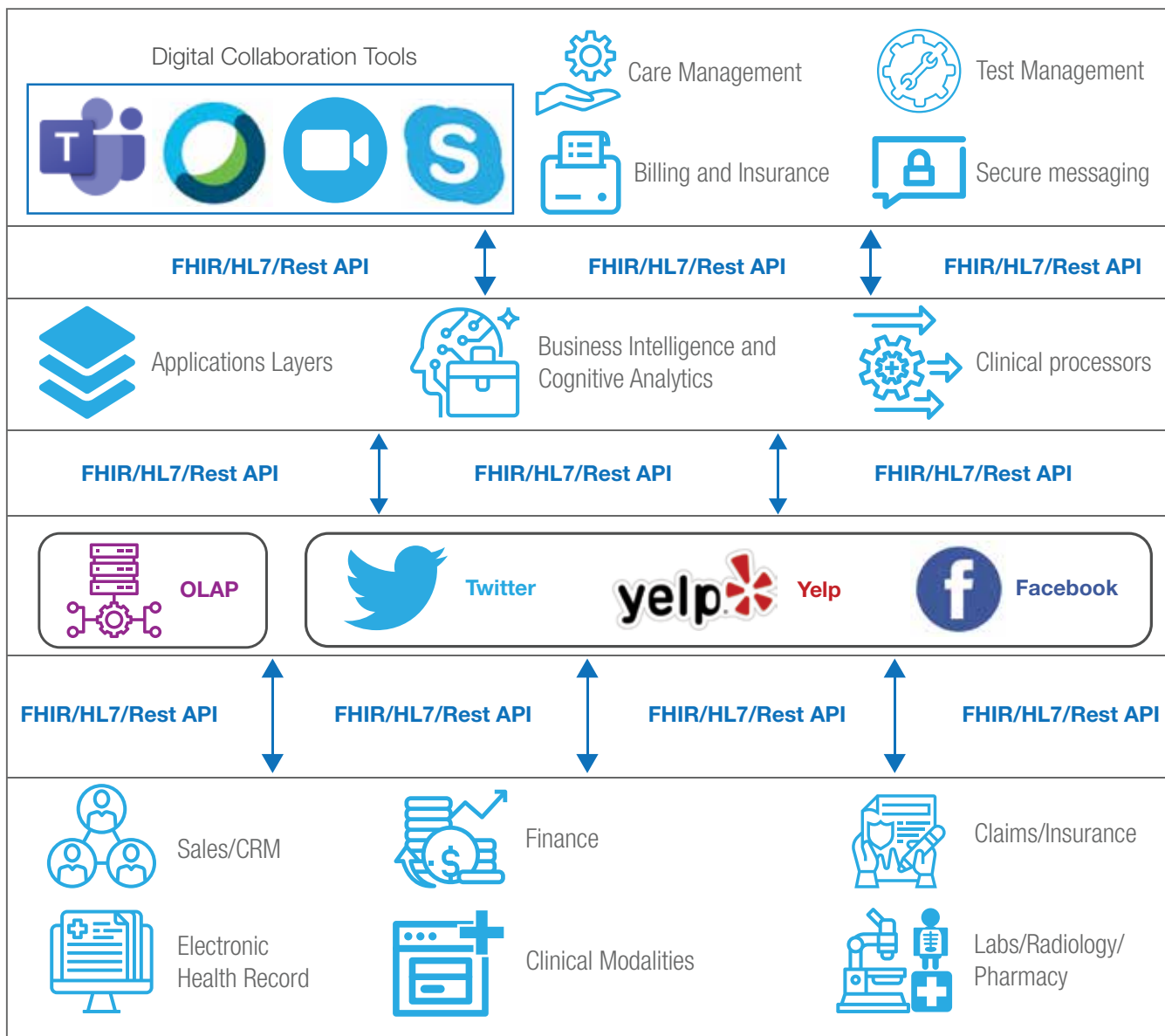


Fig 2: Ecosystem - Digital Front Door

6.

Conclusion

The healthcare industry has changed substantially with more emphasis on remote and value-based care. In the times of VUCA (Volatility, Uncertainty, Complexity, and Ambiguity), greater emphasis will be on leveraging cutting-edge technological innovations for every touchpoints of patient care. The onus is on healthcare providers to increasingly adopt and leverage emerging digital technologies to create ecosystem of services and offerings that aim to empower patients and create improved seamless experience while enhancing integrated end-to-end care. As the army of pushing such front doors, healthcare sector needs to leapfrog in the new frontier of the digital era.

7.

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About Mphasis

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