

CLINIC

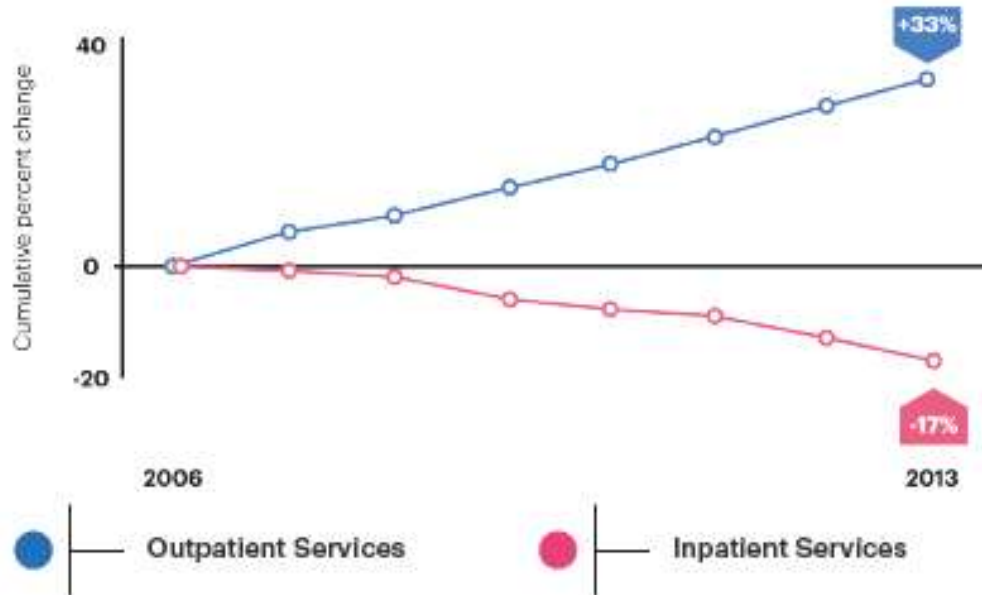
20XX

DESIGNING FOR AN EVER-CHANGING PRESENT

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Research and Evaluation

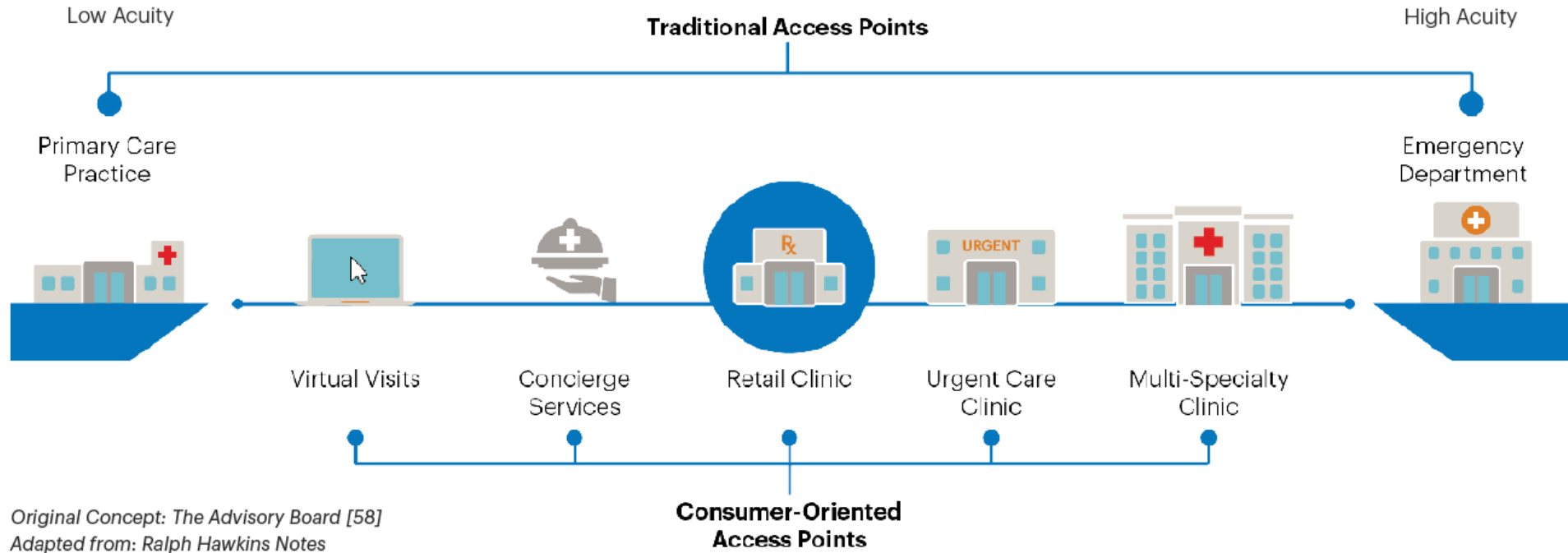
THE RISE OF OUTPATIENT SERVICES



Adapted from preliminary data from MedPac [3]

Growth in Ambulatory Construction Projects in the Next Three Years

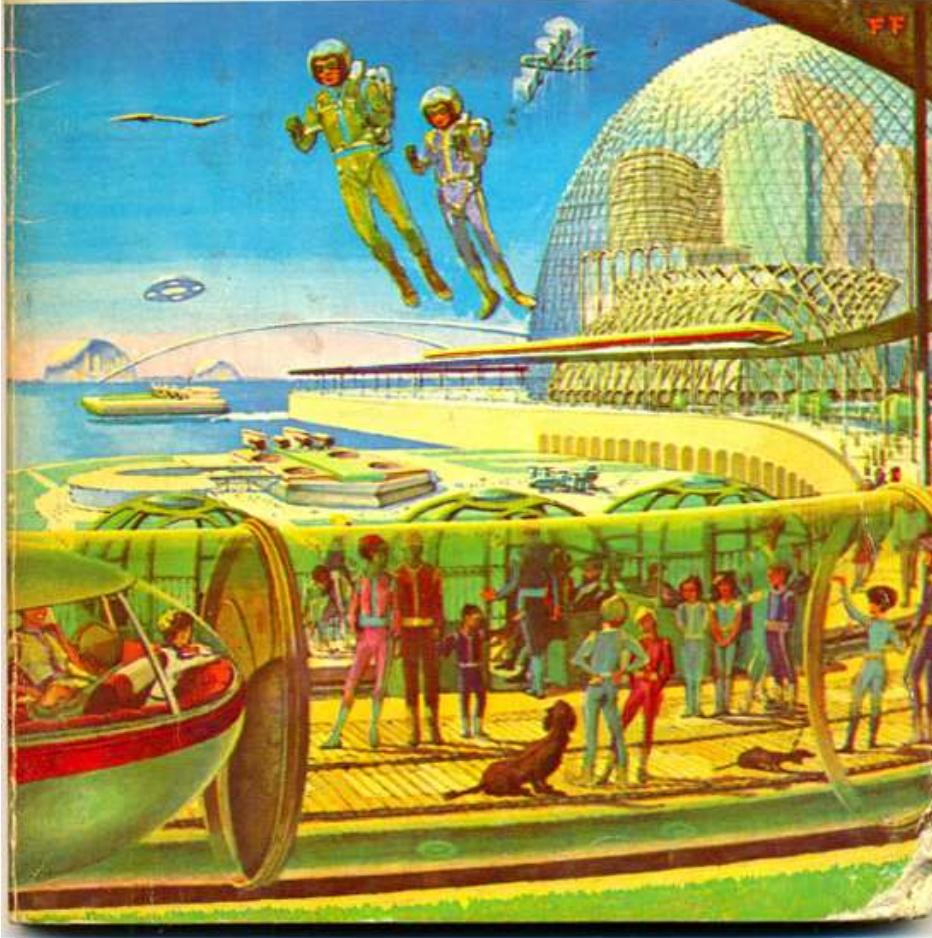




What is the clinic of the future?

Our Future World in 1999

Art by Fred Freeman (1906-1988)



In this art of the world in 1999 and beyond, Fred Freeman envisioned that we would have such technological marvels as rocket belts, domes over cities to control climate, hovering vehicles, flying boats, moving sidewalks everywhere and flying saucer-shaped transports.



How do we design not for a
faceless future but a dynamic,
ever-changing present?

2016

2030

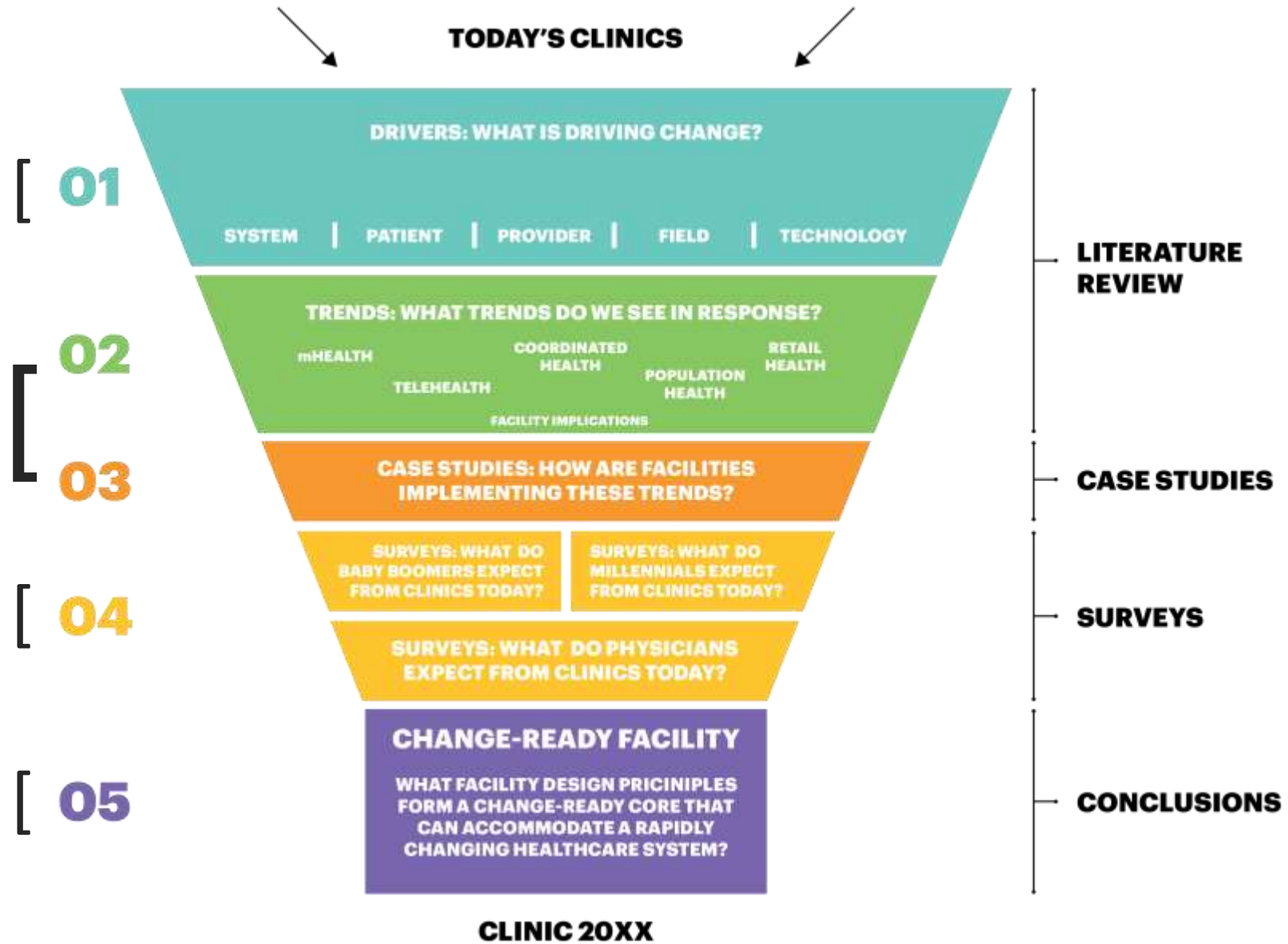
20XX

DESIGNING FOR AN EVER-CHANGING PRESENT



What is
changing today?

smart



TODAY'S CLINICS

DRIVERS: WHAT IS DRIVING CHANGE?

SYSTEM | PATIENT | PROVIDER | FIELD | TECHNOLOGY

01

TRENDS: WHAT TRENDS DO WE SEE IN RESPONSE?

mHEALTH | TELEHEALTH | COORDINATED HEALTH | FACILITY IMPLICATIONS | POPULATION HEALTH | RETAIL HEALTH

02

CASE STUDIES: HOW ARE FACILITIES IMPLEMENTING THESE TRENDS?

03

SURVEYS: WHAT DO BABY BOOMERS EXPECT FROM CLINICS TODAY?

SURVEYS: WHAT DO MILLENNIALS EXPECT FROM CLINICS TODAY?

04

SURVEYS: WHAT DO PHYSICIANS EXPECT FROM CLINICS TODAY?

05

CHANGE-READY FACILITY

WHAT FACILITY DESIGN PRINCIPLES FORM A CHANGE-READY CORE THAT CAN ACCOMMODATE A RAPIDLY CHANGING HEALTHCARE SYSTEM?

LITERATURE REVIEW

CASE STUDIES

SURVEYS

CONCLUSIONS

CLINIC 20XX

01 DRIVERS

SYSTEM | PATIENT | PROVIDER | FIELD |
TECHNOLOGY

02 TRENDS

mHEALTH | TELEHEALTH | COORDINATED HEALTH
POPULATION HEALTH | RETAIL HEALTH

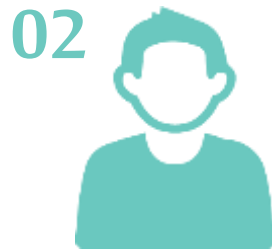
WHAT IS CHANGING TODAY?

Drivers



SYSTEM

more access.
more accountability.



PATIENT

chronic conditions, consumer expectations.



PROVIDER

physician shortage, extender/team increase.



FIELD

advanced diagnostics, precise & personalized medicine.



TECHNOLOGY

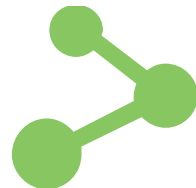
technology boom, big data and sophisticated construction

Trends



mHealth/Telehealth

health at hand,
remote access



Care Coordination

coordination between patients,
providers and systems



Population Health

community-based whole health

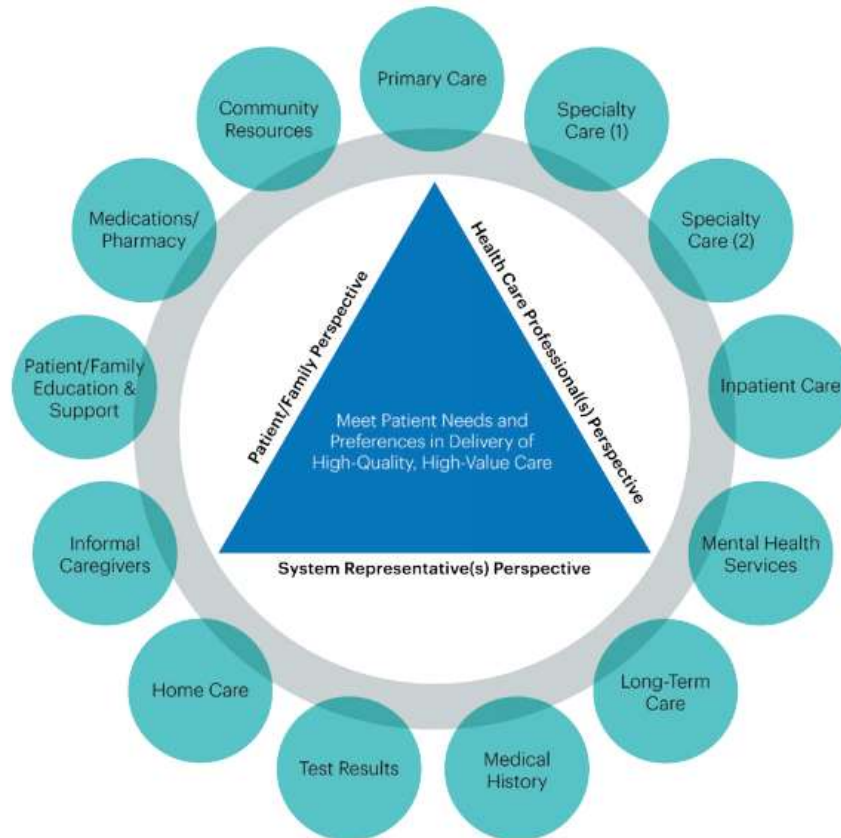


Retail Health

demand-focused, choice-based
health

THE NEW SYSTEM. MORE ACCESS, MORE ACCOUNTABILITY.

Accountable Care Organizations



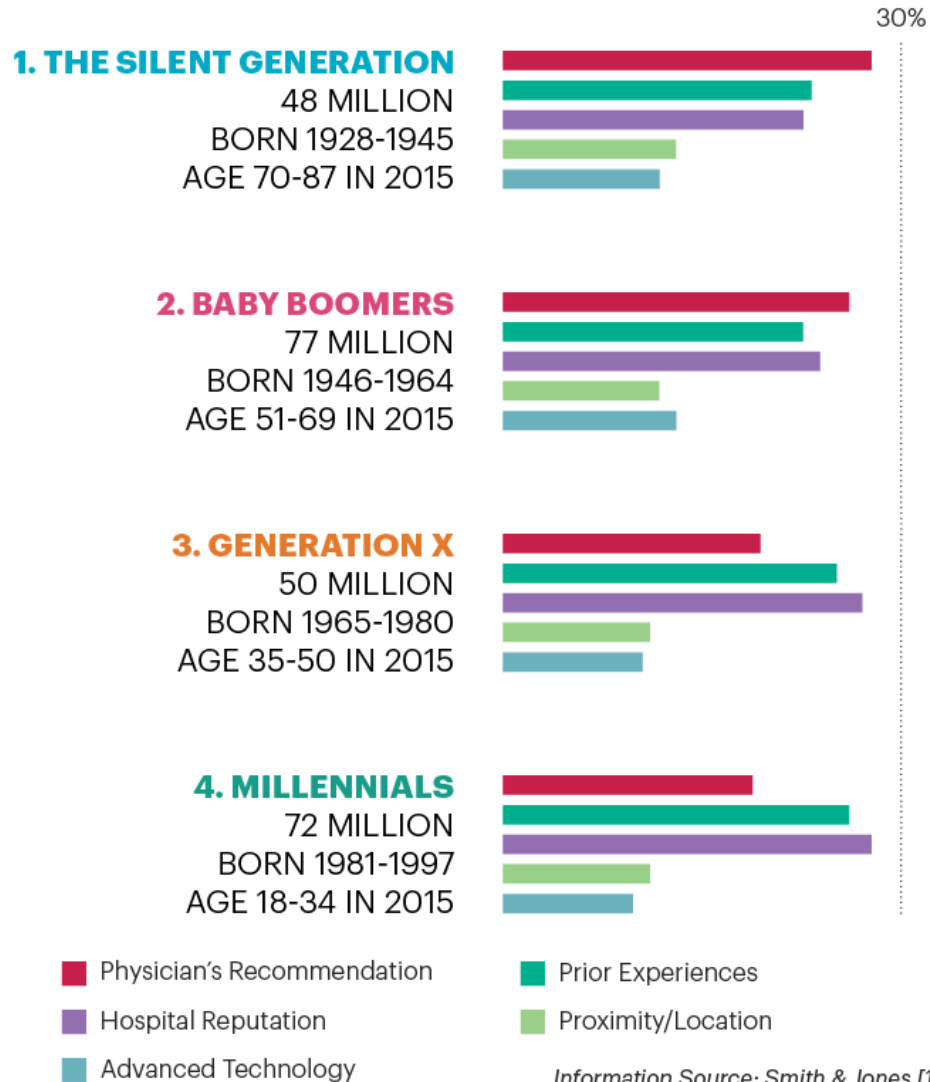
Adapted from Care Coordination Atlas [11]

Patient-Centered Medical Homes

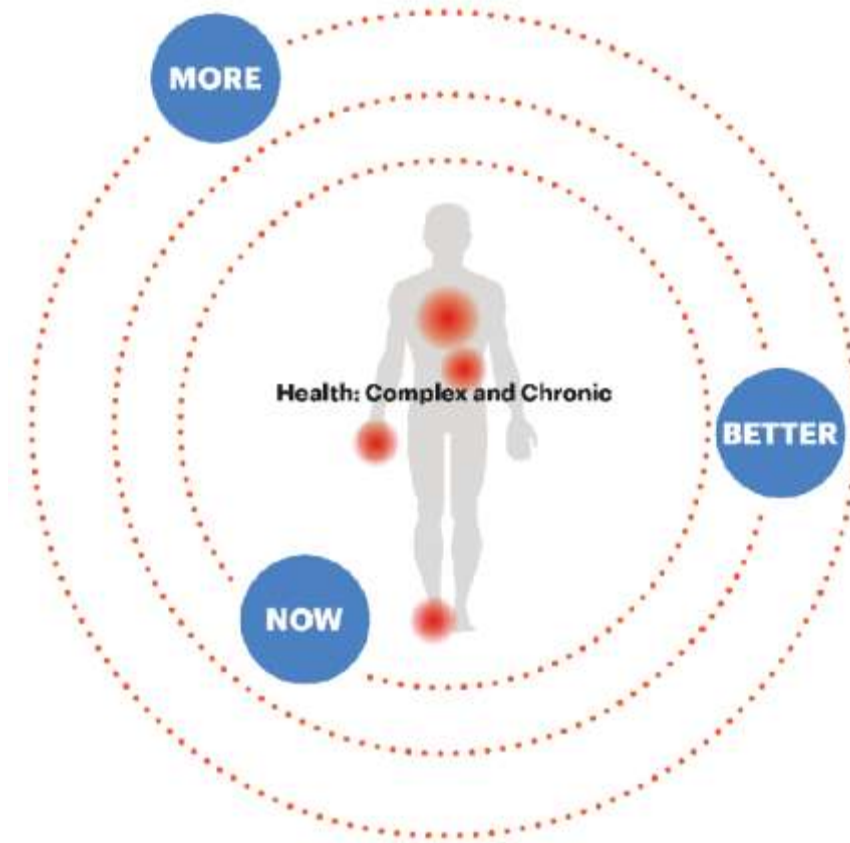


Information Source: AHRQ [13]

THE NEW PATIENT. CHRONIC CONDITIONS, CONSUMER EXPECTATIONS, FOUR GENERATIONS



Information Source: Smith & Jones [16]

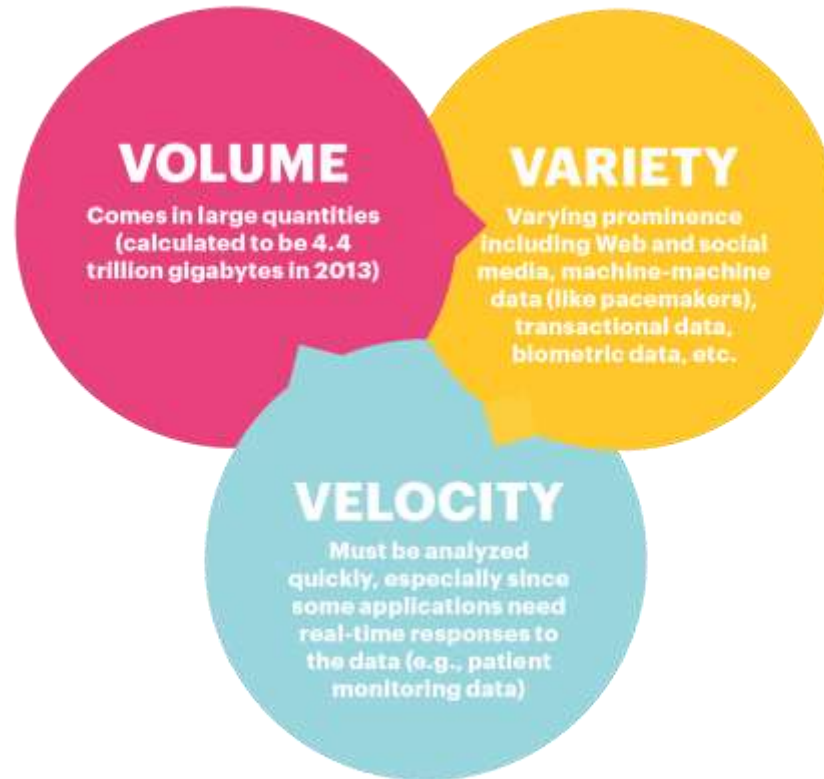


THE FIELD. ADVANCED DIAGNOSTICS. PRECISE & PERSONALIZED MEDICINE.

HKS



DRIVER



“PRECISION MEDICINE IS AN INNOVATIVE APPROACH TO DISEASE PREVENTION AND TREATMENT THAT TAKES INTO ACCOUNT INDIVIDUAL DIFFERENCES IN PEOPLE’S GENES, ENVIRONMENTS, AND LIFESTYLES”

—White House Fact Sheet on President Obama’s Precision Medicine Initiative (2015) [30]

mHEALTH. HEALTH AT HAND.



Ingestible Technology: smart pills that are swallowed with medication to track and photograph the patient from within

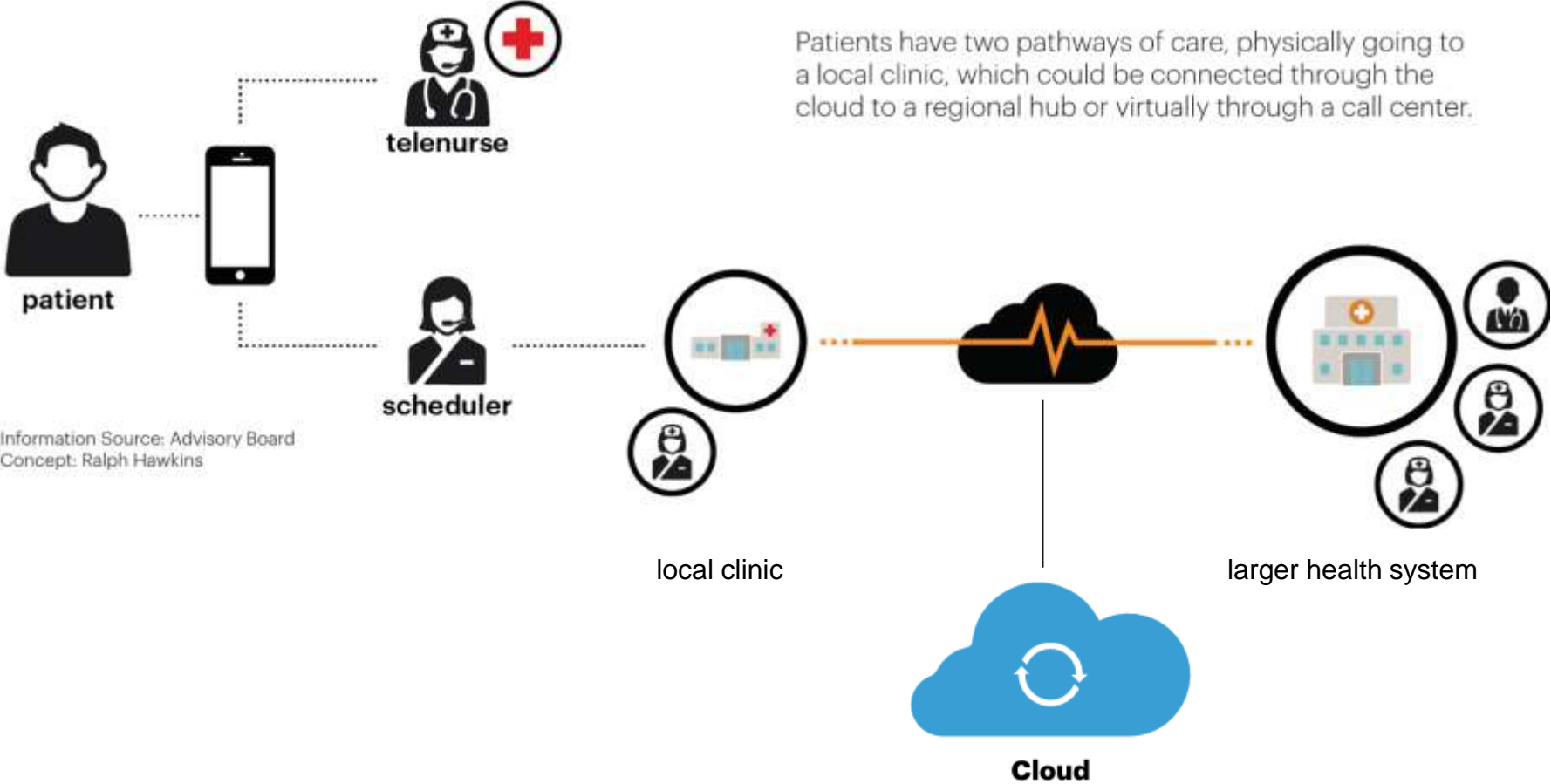
Wearable Technology: allows consumers to track their health and fitness and remotely share that data with their physician

Smartphone Attachments: Patients can attach modules to their smartphone to record and share biometrics like heart rate and blood pressure

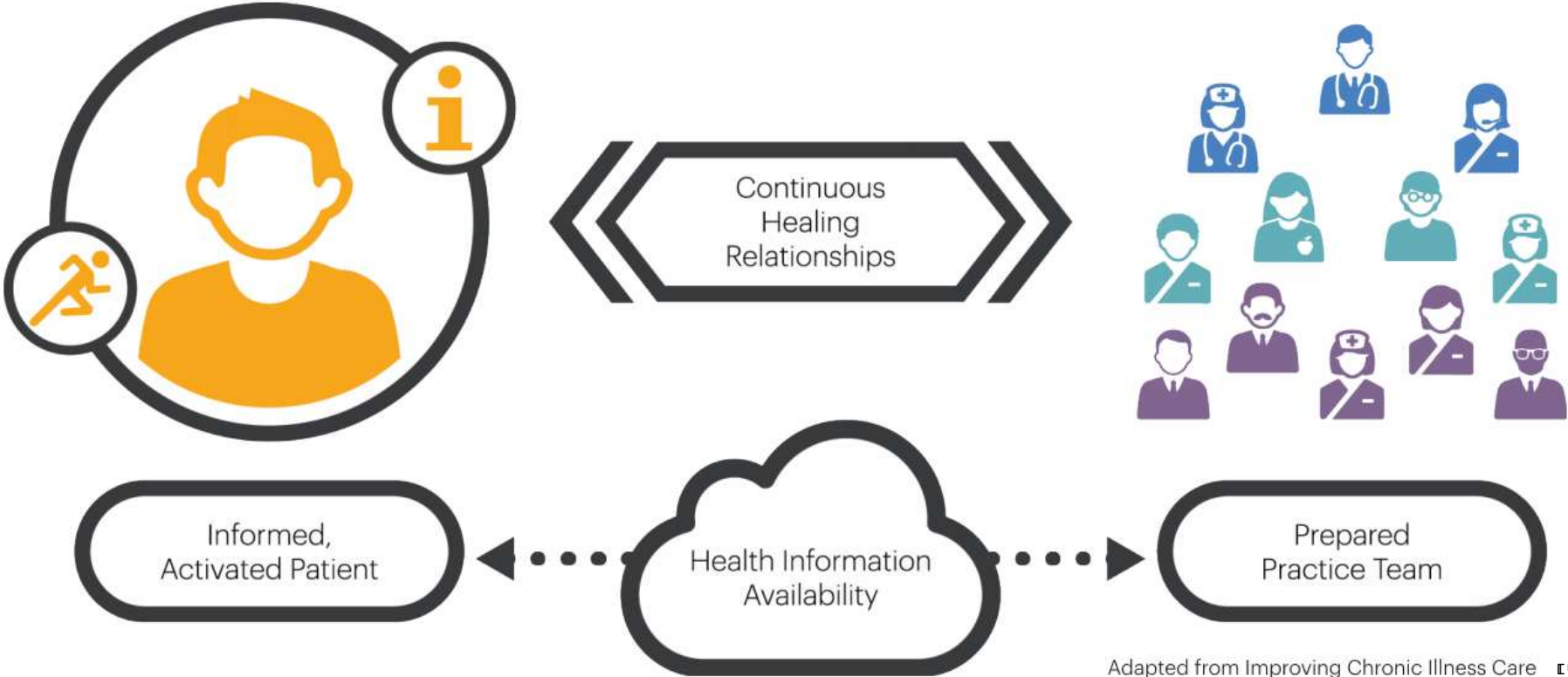


Patient portals

TELEHEALTH. REMOTE ACCESS.



COORDINATED HEALTH. COORDINATION BETWEEN PATIENTS, PROVIDERS AND SYSTEMS.



Adapted from Improving Chronic Illness Care [49]

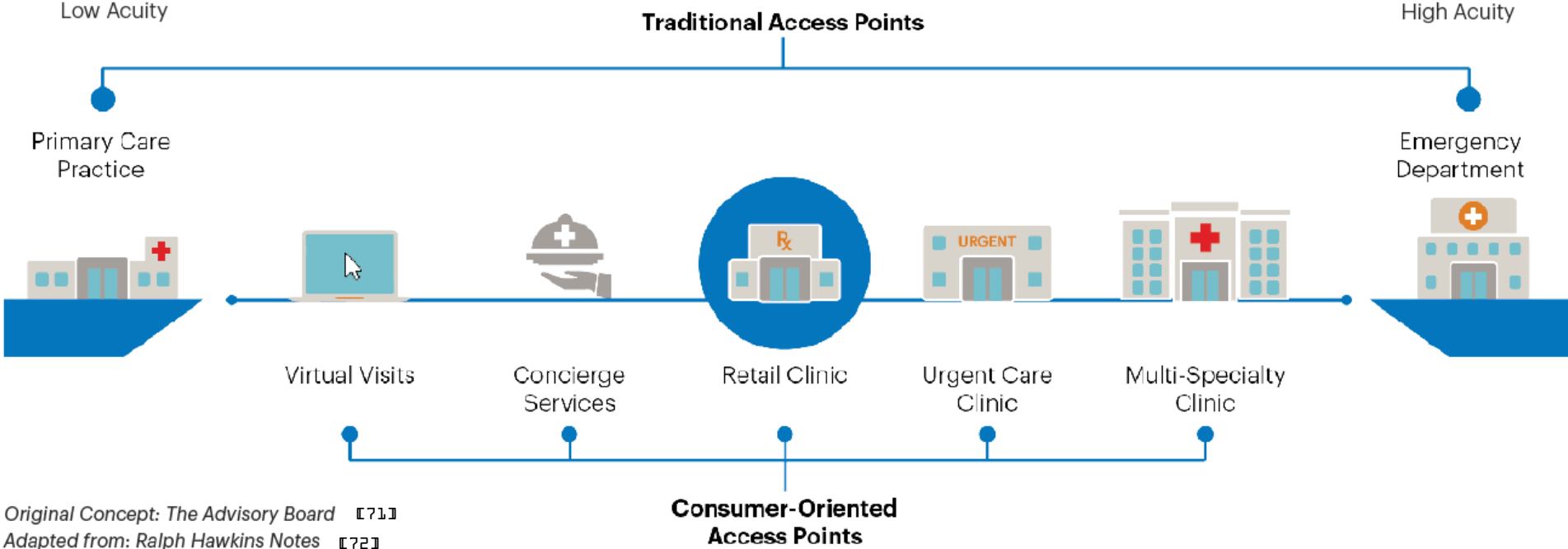
POPULATION HEALTH. COMMUNITY-BASED HEALTH.



Information Source: PHM Roadmap HL [51]



RETAIL HEALTH. DEMAND-FOCUSED, CHOICE-BASED HEALTH.



03 CASE STUDIES

CASE
STUDY

Kaysville Creekside Clinic, Intermountain
Healthcare (Utah)
Architect: HKS, Inc.

HKS



COORDINATED HEALTH. FACILITY IMPLICATIONS.

Staff Workspace



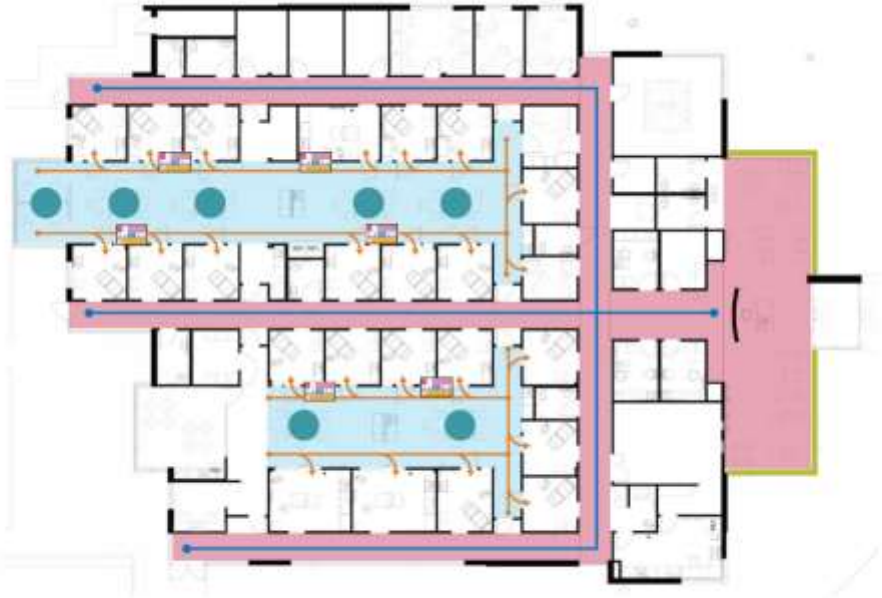
On-Stage/Off-Stage



Team Collaboration Space



Digital Integrated Greaseboard (DIG)



Patient Path



Daylit Lobby



Greeting Center

- Open Office
- Hoteling Spaces
- Touchdown Areas
- Proximity Across Specialties
- On-Stage/Off-Stage
- Digital Integration



**“CLINICS MUST BE DESIGNED AROUND
THE MOST EFFICIENT WORKFLOW.”**

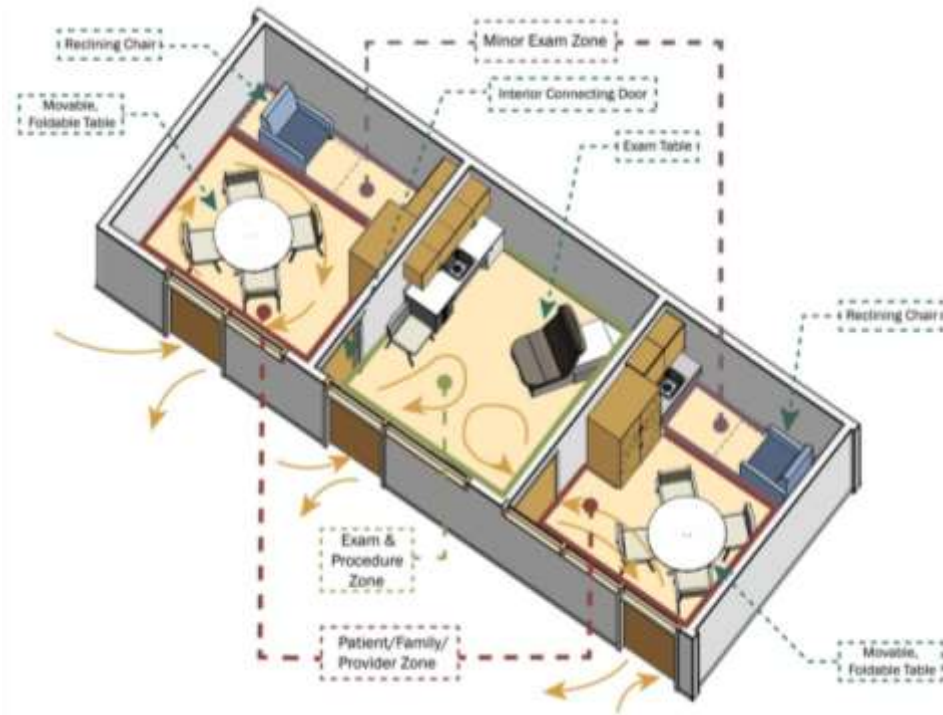
-Tim Hatch, Director of Strategic Planning, Intermountain Healthcare

CASE
STUDY

Adelante Healthcare Mesa, Adelante
Healthcare (Arizona)
Architect: Adelante Facilities



POPULATION HEALTH.

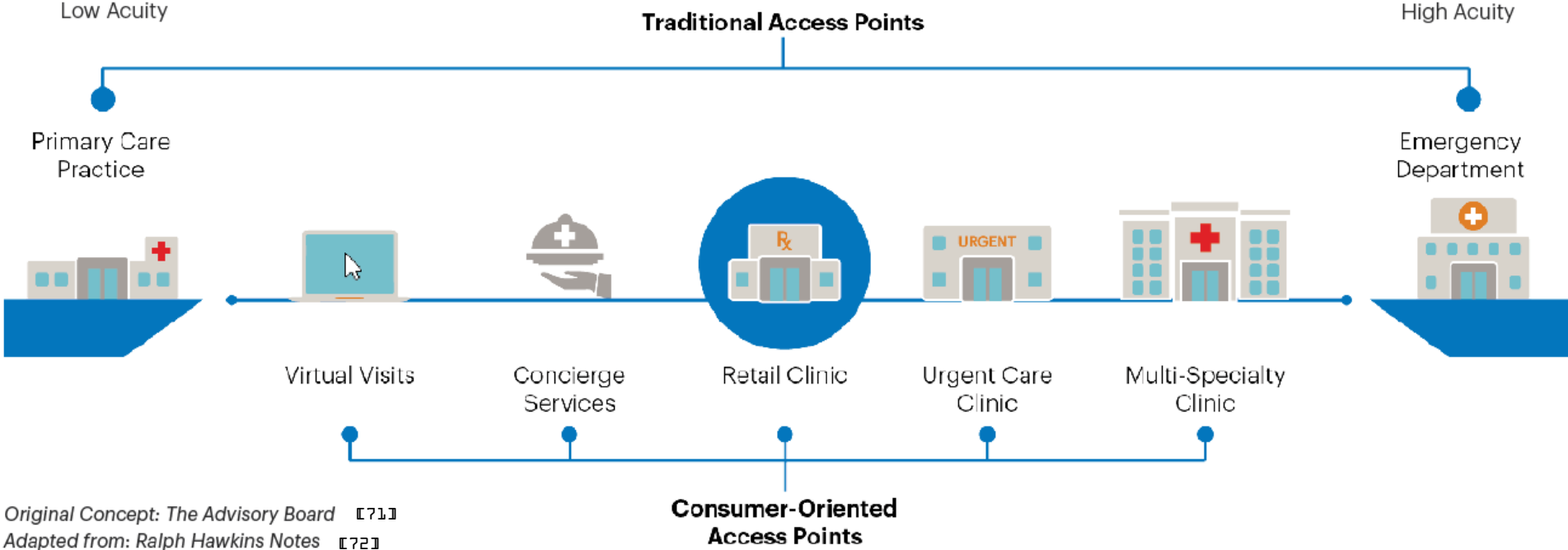


- Flex education spaces
- Community gardens
- On-site access
- Proximity to Wellness and Fitness Amenities
- Community Engagement
 - Multipurpose rooms that host meetings for various community organizations



RETAIL HEALTH. DEMAND-FOCUSED, CHOICE-BASED HEALTH.

TREND
05



RETAIL HEALTH. FACILITY IMPLICATIONS.



- Speed to Market
- Modularity and Prototyping
- Prefabrication
- Hospitality Elements and Branding



CASE
STUDY

MGC Family Medicine - Five Forks, Medical
Group of the Carolinas (South Carolina)
Architect: McMillan Pazda Smith



RETAIL HEALTH. MGC FAMILY MEDICINE – FIVE FORKS



Inspiration from Retail: Retail is playing an increasing role in the design and efficiency of clinics. As mentioned in the previous section, Apple, BMW and Disney each played a unique role in improving the patient experience at MGC Family Medicine.

- Integrated Technology
- Music Buffer
- In-Room-Out
- Wait as the Visit
- On-Stage/Off-Stage
- Standardization
- Flexible and Moveable Furniture
- Family Room, Not Exam Room



CLINIC LEADERSHIP PERSPECTIVE

WHAT WILL CHANGE?

- Patient-provider time/type of contact
- Type of nursing talent to respond to EHR needs
- Shift to health management in family practice
More connectivity to the system
- More team based, managed care
- More reliance on technology

WHAT WILL NOT CHANGE?

- Patient-provider need for contact
- Challenges with physician buy-in
- Connection to real people versus machine
- Issues with reimbursement

04 SURVEYS: KEY STAKEHOLDER PERSPECTIVE

IDEA DU JOUR VS. SUSTAINABLE IDEAS

328 RESPONSES

167 AGE GROUP
1946 - 1964

84
OLDER BOOMERS
1946 - 1954

83
YOUNGER BOOMERS
1955 - 1964

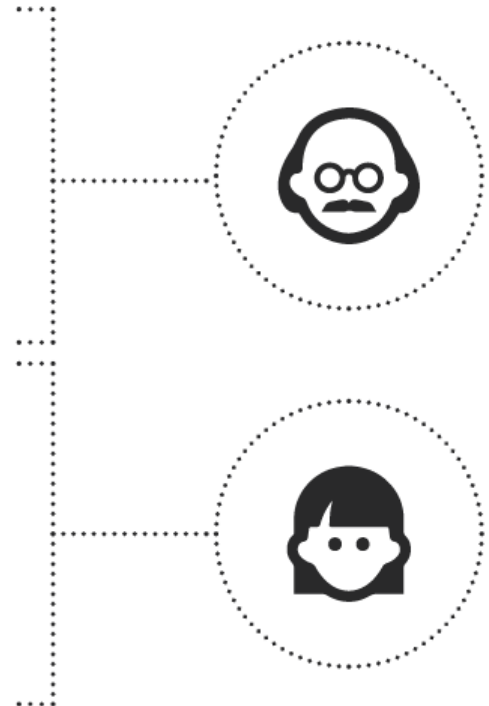
161

MILLENNIALS
1981 - 2000

97
OLDER MILLENNIALS
1981 - 1990

51
YOUNGER MILLENNIALS
1991 - 2000

13 MISSING



100 PHYSICIANS

51

FAMILY
PRACTICE

49

INTERNAL
MEDICINE

24
45 YEARS OLD
OR YOUNGER

33
46 - 55 YEARS OLD

35
56 - 65 YEARS OLD

8
66 YEARS OR
OLDER

⤴ THE SURVEY WAS SENT TO INDIVIDUALS WHO HAD VISITED AT LEAST ONE CLINIC FOR THE FIRST TIME WITHIN THE LAST SIX MONTHS.

Patient vs. Consumer



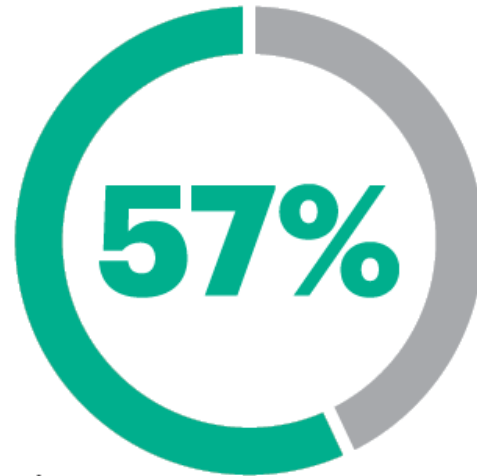
A patient needing health services



A consumer buying health services

Patients First! The clinic patient is not the typical consumer

Experience vs. Service

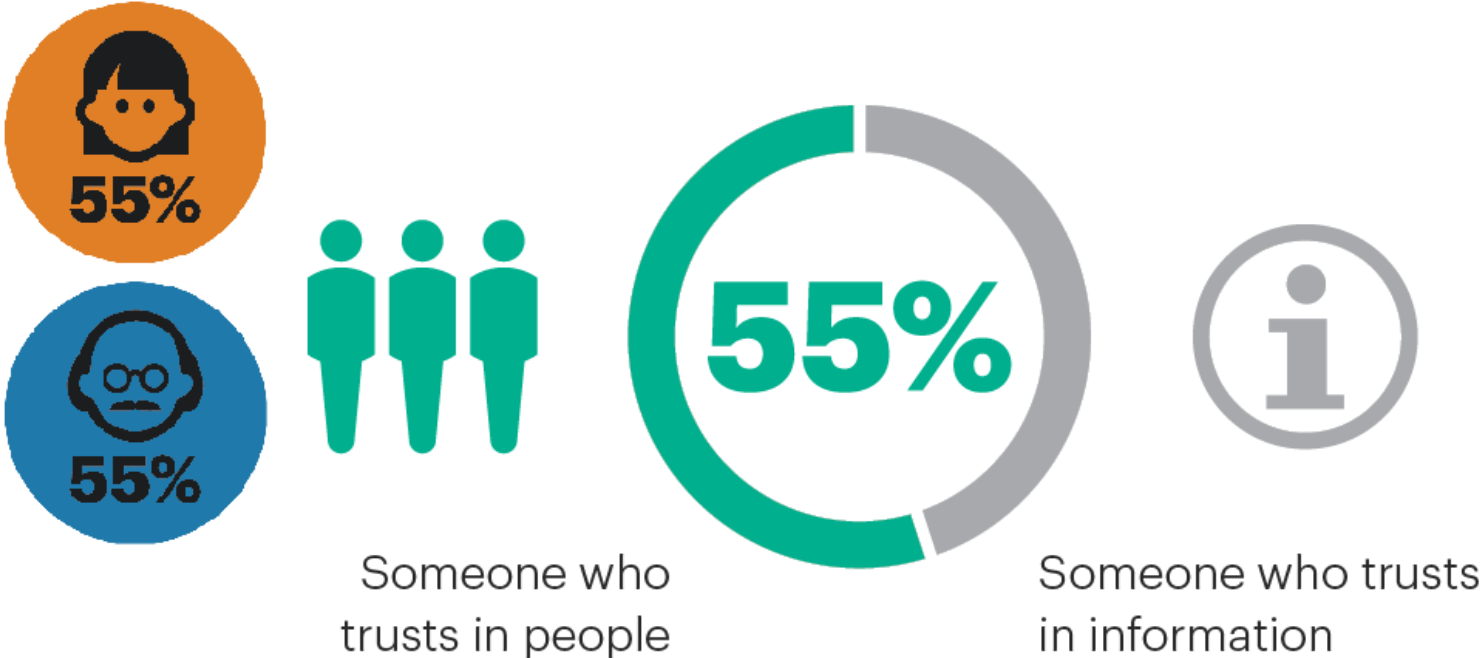


Having a good experience is more important than just having my health issue addressed

As long as my health issue is addressed, I don't really care about the experience

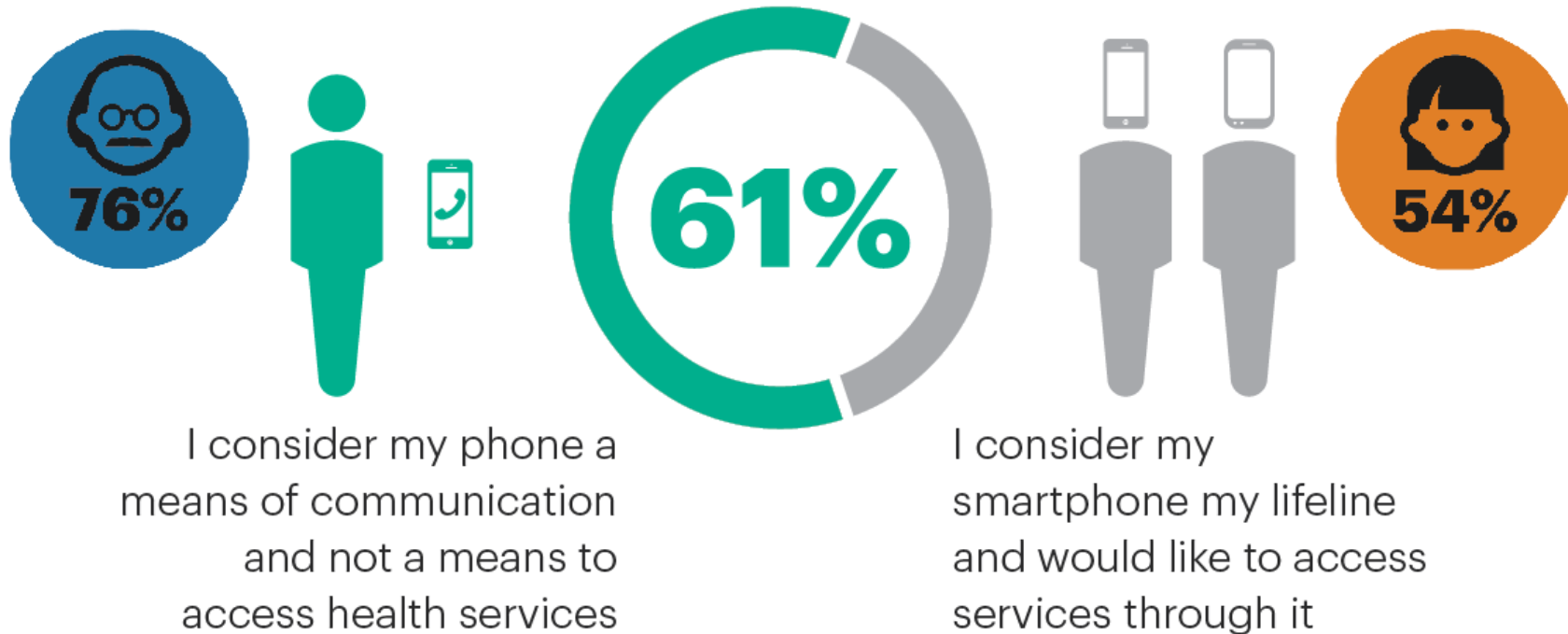
Experience is important, especially for millennials

People vs. Information



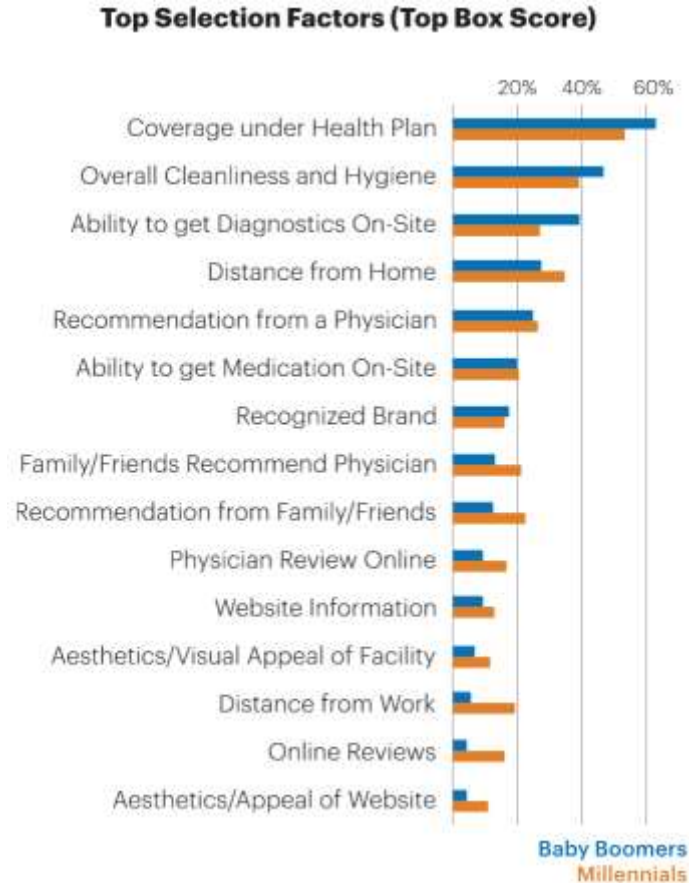
People trust people

Phone vs. Portal



Times are changing- millennials see their phones as the portal

What made patients select their clinic?



Top Selection Factors (overall mean)

Coverage Under Health Plan



4.2/5.0

Overall Cleanliness



3.8/5.0

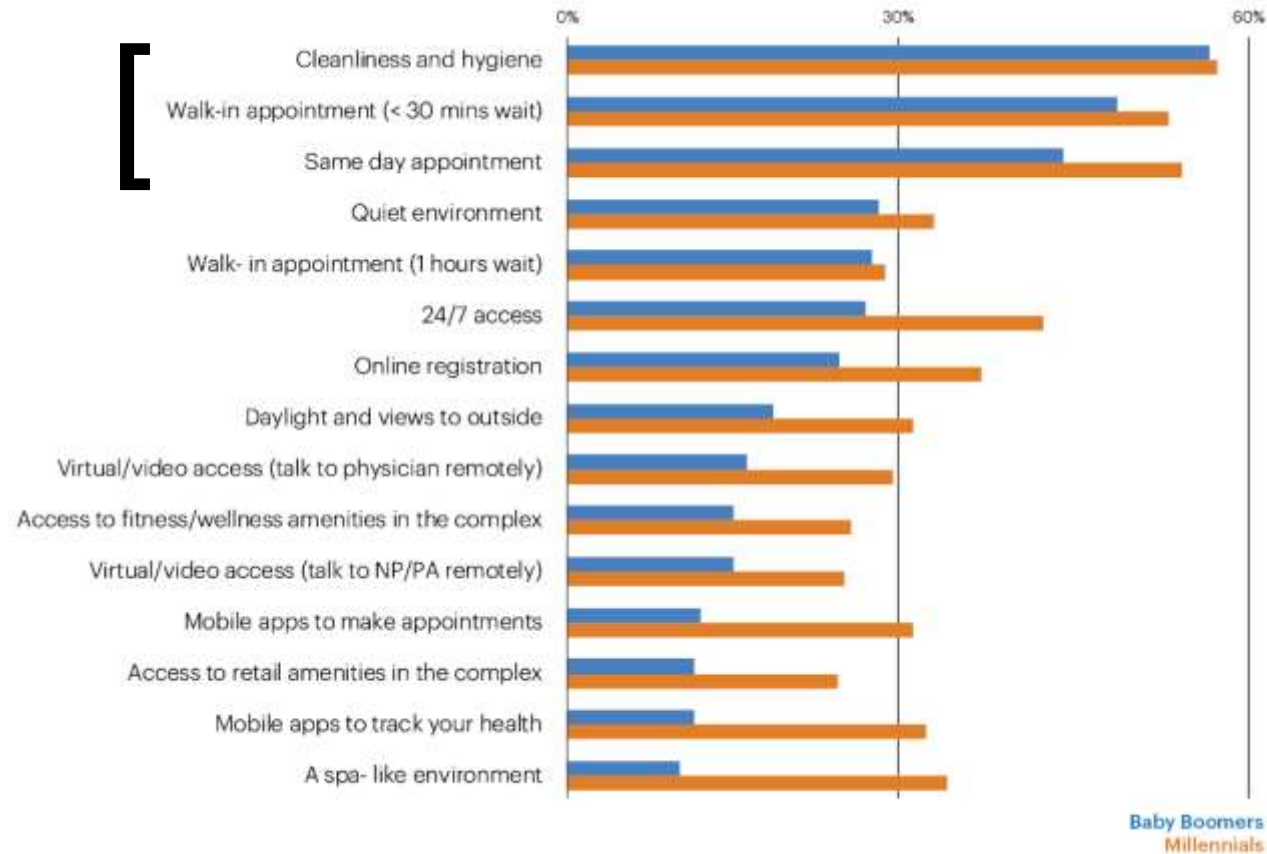
On-Site Diagnostics



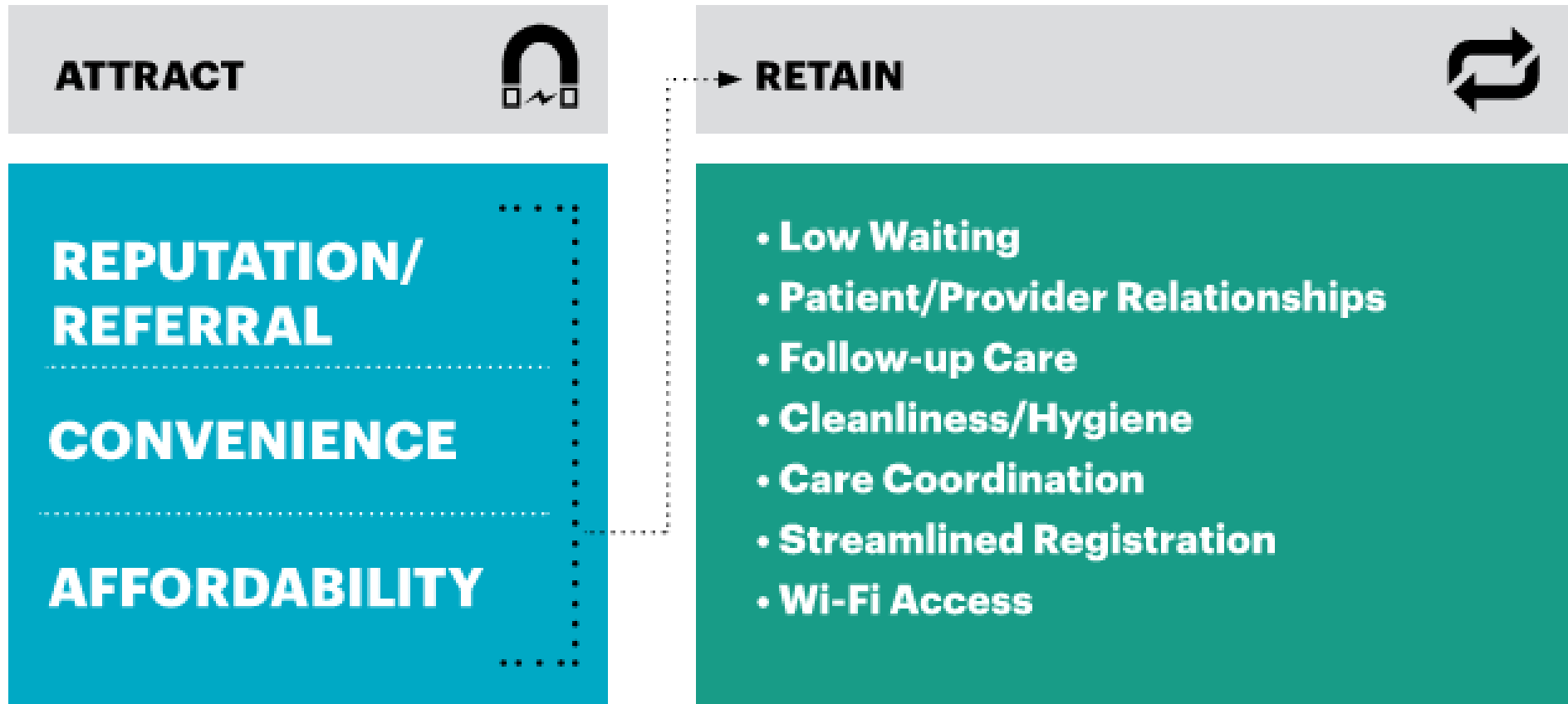
3.7/5.0

Healthcare coverage & perception of cleanliness are important for boomers and millennials

What features make a clinic more appealing?



Boomers have more streamlined and pragmatic priorities
Millennials want more. Use of apps, and a “spa-like” environment
are much higher for millennials compared to boomers.



According to **physicians**, what are the top considerations for better patient experience **HKS**



Patient-Provider Relationship



More Time with Physician



Low Wait Time



4.51

**Facility
Cleanliness**



4.46

Privacy



4.38

**Comfortable
Temperature**

Cleanliness, privacy and comfort are the top three facility considerations that can improve patient experience

What facility features help physicians run a successful practice?

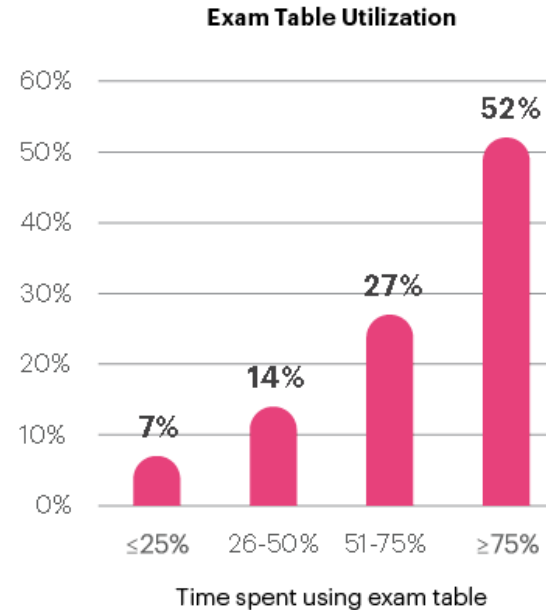
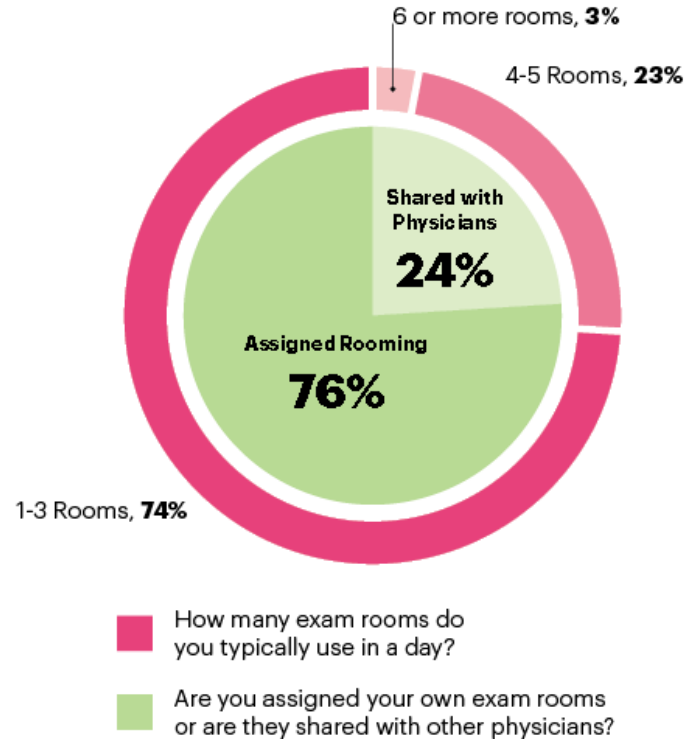


Availability of the exam room, first!

Physicians also want ease, efficiency, and space for interaction.

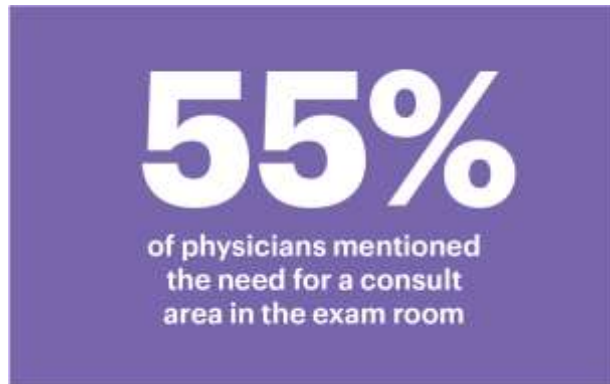
The Exam Room holds the key to a successful practice

How do physicians utilize their exam rooms?



A majority of the physicians are assigned between 1-3 rooms. More than half the physicians state that they use the exam table more than 75% of the time.

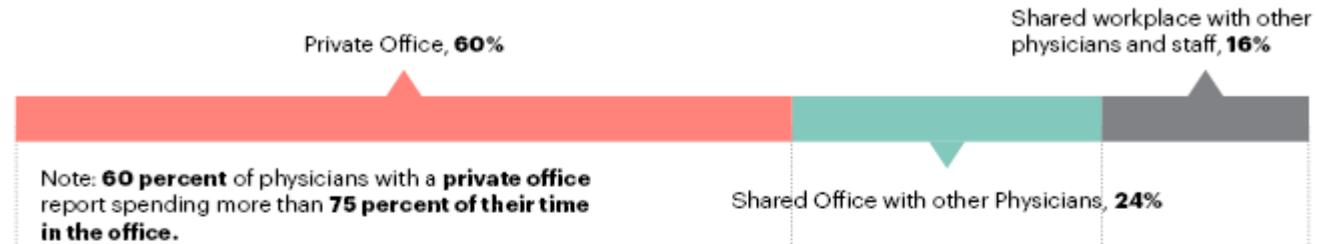
What constitutes the “Ideal” Exam Room?



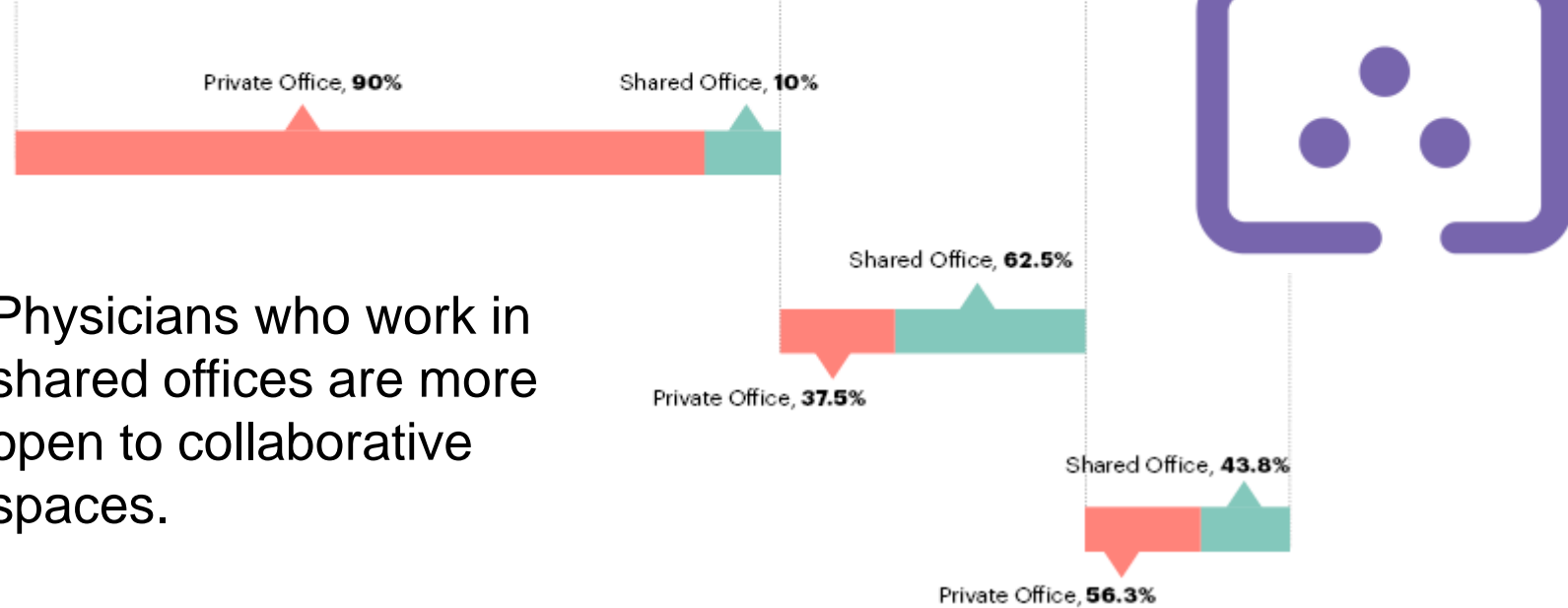
The ideal exam room has an exam table, chairs, a desk, a computer; is well-lit and roomy; and allows convenient face-to-face interactions. It should also accommodate limited mobility patients

Where do physicians work today? Where would they prefer to work?

Current Workspace

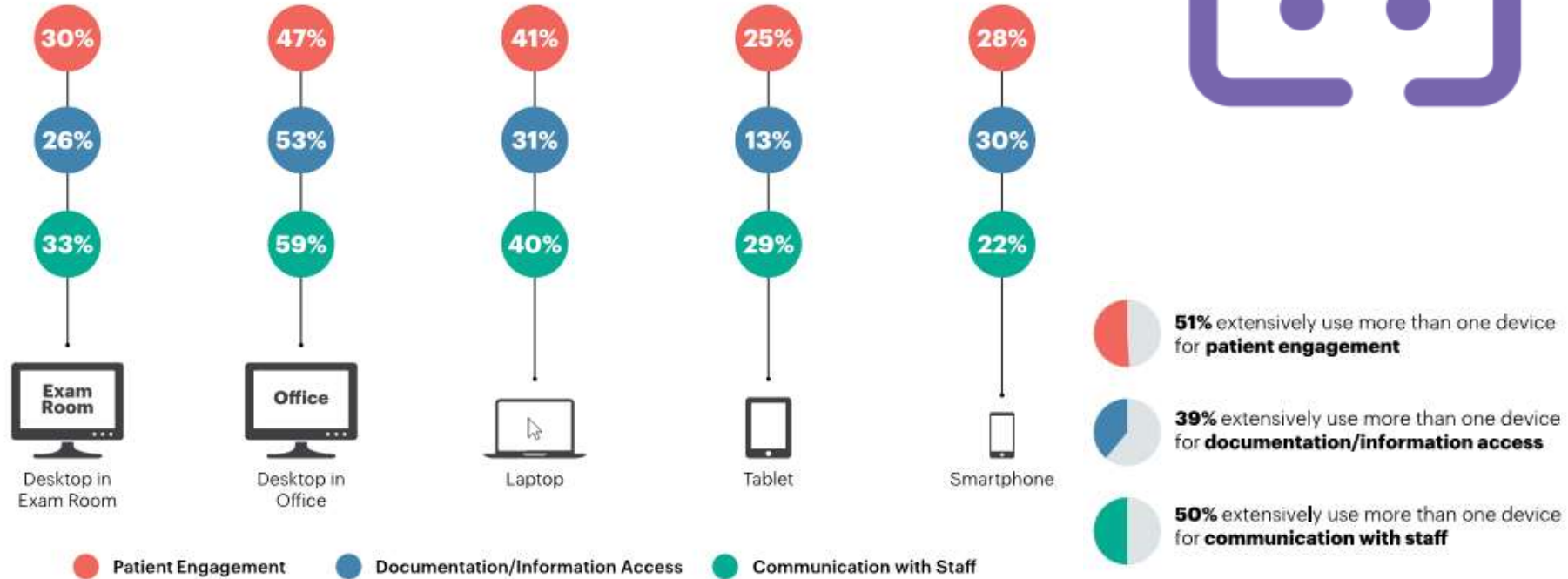


Preferred Workspace



Physicians who work in shared offices are more open to collaborative spaces.

What devices do physicians use? What do they use them for?



Physicians use multiple devices, especially for patient engagement.
Desktop in the office is still the most common device.

05 CHANGE-READY FACILITIES

OUTPATIENT CLINIC DESIGN

HKS POINT OF VIEW



Clinics will be the first point of contact between a patient and health system, with the most reach into a community.

Facilities have to facilitate this connection. They will serve as the conduit between the cloud and the community.

CLINIC 20XX

THE PATIENT

HKS



I am a patient...
Who wants a meaningful interaction...
With somebody I trust...
At a reasonable cost...
In a clean and convenient location...
Connected to my wider social network...
Where I am the priority.
I don't want to shop for healthcare, but I want to be taken care of in the best way possible.



87% of people see themselves as patients, not consumers



Cleanliness is a priority



Overall satisfaction, follow-up care and Wi-Fi connectivity predict the return to a clinic

CLINIC 20XX

THE PHYSICIAN



I am a physician...

Who wants to spend time with my patients...

Who wants to have meaningful interactions...

At the right time, with the right tools, in the right place with the right information.

I don't want to waste time documenting.

I can work in a team with the best technology and the best information to empower my patients' health.



60% of physicians believe **time would be better utilized with less documentation** and better EMR



Patient relationships are the top priority



Physicians who work with **case managers** are **more satisfied** with their practice



Mobile and Tele-health:

A question of Trust and Connectivity

Physicians and millennials are ready for telehealth; boomers – not so much!



Population health:

Just getting started



Coordinated health:

Integral and co-dependent

Physicians not completely on board

Patients still consider physician interactions the most meaningful



Retail health:

All about Experience- but not necessarily being a “consumer”
Speed to market is key

BLURRING BOUNDARIES



Understanding the shifting boundary between cloud-space and facility footprint. Understanding the connections between clinic spaces, and preparing for the shape-shift that may occur in the future .

CHANGE-READINESS


THE CHANGE-READY CORE

2 Spaces

CONSULT SPACE




WORKSPACE



3 Distinct Characteristics

CONNECTIVITY



FLEXIBILITY



SENSE OF PLACE



Strategic location | Easy access to site (physically + virtually) | Connectivity between key spaces (physical + digital connectivity) that allow optimum workflow | Connectivity between key team members (physical + digital) | Connectivity between patient and provider (physical + digital) | Easy access to information | Connectivity to cloud, team and community. | Wi-Fi access

Ability to expand and contract based on varying needs | Ability to rotate functionality | Ability to accommodate rapidly changing technology

Materials, finishes and configurations that promote cleanliness + perception of cleanliness | Configurations and ambience that support meaningful interactions between patient and provider | Comfort (sensory) | Quietness | Visual appeal

THE PATIENT EXPERIENCE

WAITING

Always engaged

Remove “waiting” room from the vocabulary

Use the time spent waiting education and preparation

Name rooms based on purpose. Waiting has no purpose.





Consult Space



Connectivity
Flexibility
Sense of Place



Workspace

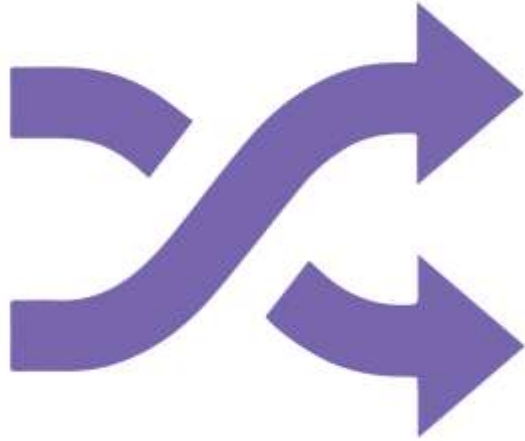




Connectivity

- Physical and virtual access to site
- Strategic location
- Connectivity between:
 - key spaces
 - key team members
 - patient and provider
 - healthcare system
- Easy access to information
- Wi-Fi access





Flexibility

- Expand and contract in size
- Rotate functionality
- Accommodate rapidly changing technology
- Modular approach

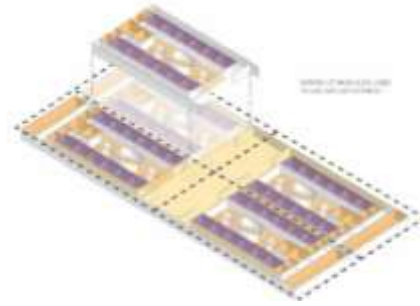
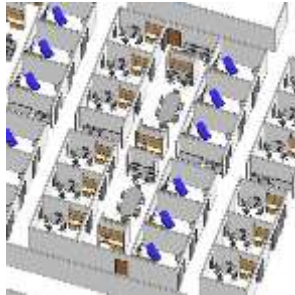


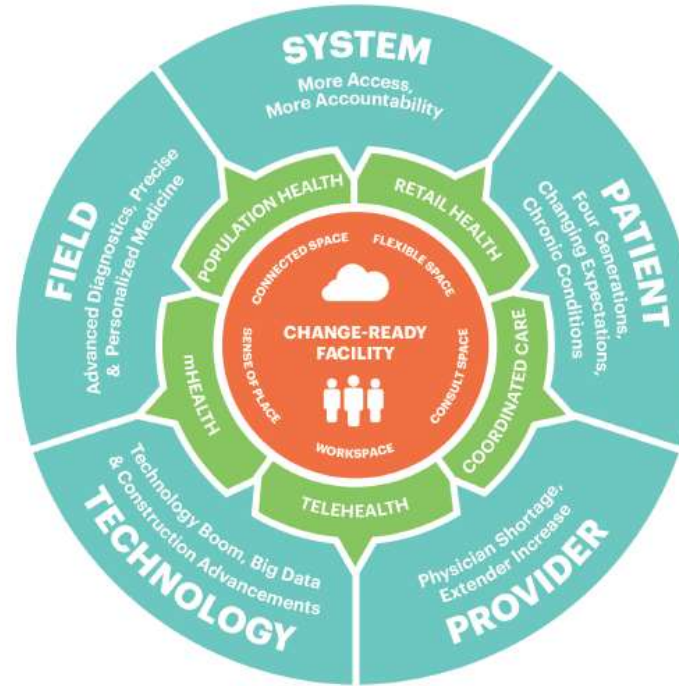
Photo credit: DIRTT, BLOX, McMillan Pazdan Smith



Sense of Place

- Materials and finishes that promote cleanliness and perception of cleanliness
- Configurations that support meaningful interactions between patient and provider
- Comfort (sensory)
- Quiet
- Visual Appeal





DRIVERS

- D1 | SYSTEM**
more access, more accountability
- D2 | PATIENT**
four generations, changing expectations, chronic conditions
- D3 | PROVIDER**
physician shortage, extender increase
- D4 | FIELD**
advanced diagnostics, precise and personalized medicine
- D5 | TECHNOLOGY**
technology boom, big data and construction advancements

TRENDS

- T1 | mHEALTH**
health at hand
- T2 | TELEHEALTH**
remote access
- T3 | COORDINATED CARE**
coordination between patients, providers and systems
- T4 | POPULATION HEALTH**
community-based health
- T5 | RETAIL HEALTH**
choice-based health

FACILITY IMPLICATIONS

- F1 | CONSULT SPACE**
beyond "exam" to care, communicate, educate
- F2 | WORKSPACE**
efficient workflow, collaborative culture
- F3 | CONNECTED SPACE**
physical and virtual access and connectivity between cloud, clinic and community
- F4 | FLEXIBLE SPACE**
scalable, adaptable, modular
- F5 | SENSE OF PLACE**
enhanced experience through features that promote safety, cleanliness, sensory comfort, ease of wayfinding and emotional wellbeing

CHANGE-READINESS: IT'S ABOUT FLEXIBILITY, CONNECTIVITY AND CREATING A SENSE OF PLACE THAT SUPPORTS PATIENT-PROVIDER RELATIONSHIPS

- COMMUNITY LEVEL PLANNING
- EARLY I.T. INPUT
- EARLY COORDINATION TEAM INPUT
- SIMPLE APPROACH

NEXT STEPS

- Consider Clinic 20XX as a living document- a pulse check on how clinics evolve
 - Continue polling clinics
 - Invest in deeper dives on the 5 core principles that have emerged
 - Invest in deeper dives on “inter-generational” spaces and “precise, personalized care coordination”
- Right-size clinic programs, lean out design, integrate project delivery

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Q & Q

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