



PH Digicon 2020 Breakout Session: eHealth

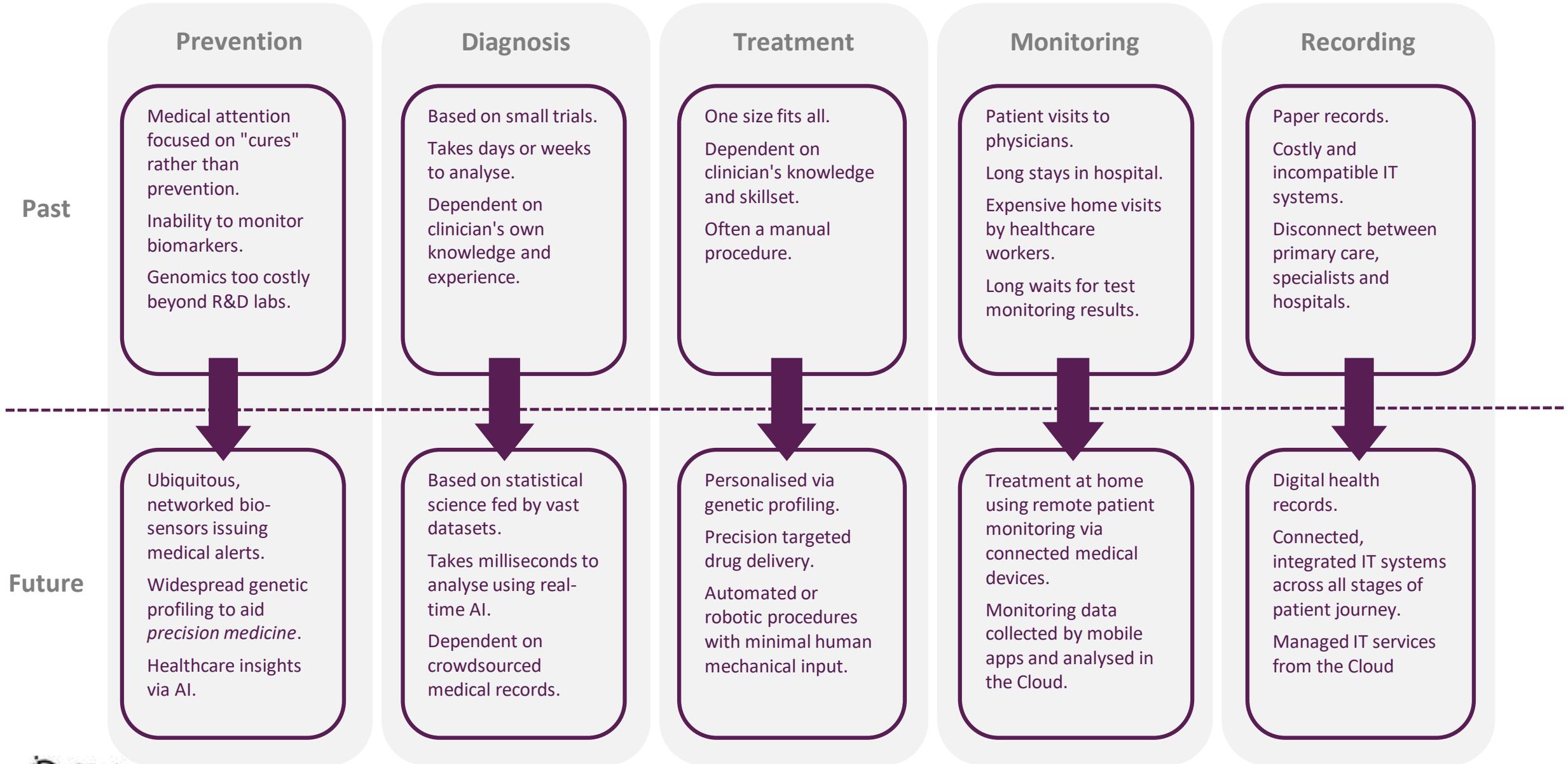
How technology is impacting the
delivery of healthcare

October 2020

Cyrus Mewawalla

Head of Thematic Research

How technology is changing the delivery of healthcare



Key technologies that could disrupt the healthcare industry over the next two years



Prevention

Diagnosis

Treatment

Monitoring

Recording

Genomics

Medical sensors

Blockchain

Artificial intelligence

Robotics

Health & Fitness Apps

Virtual reality & Augmented reality

Wearable medical devices

Telemedicine and social media

Cybersecurity

The technology sector will gradually invade the healthcare supply chain



- Insurers
- Physicians
- Pharmacies
- Hospitals
- IT systems providers

**Healthcare
Providers
(Past)**

- Insurers
- Physicians
- Pharmacies
- Hospitals
- Cloud infrastructure providers
- Artificial intelligence providers
- App developers
- Cybersecurity providers

**Healthcare
Providers
(Future)**

- Drug makers
- Medical device makers
- Surgical equipment makers

**Medical device
manufacturers
(Past)**

- Drug makers
- Medical device makers
- Surgical equipment makers
- Medical sensor makers
- Wearable medical device makers
- Ingestible device makers
- Robot manufacturers
- Biometric clothing manufacturers

**Medical device
manufacturers
(Future)**



TECH THEMES

**Medical
Sensors**

**Wearable
Tech**

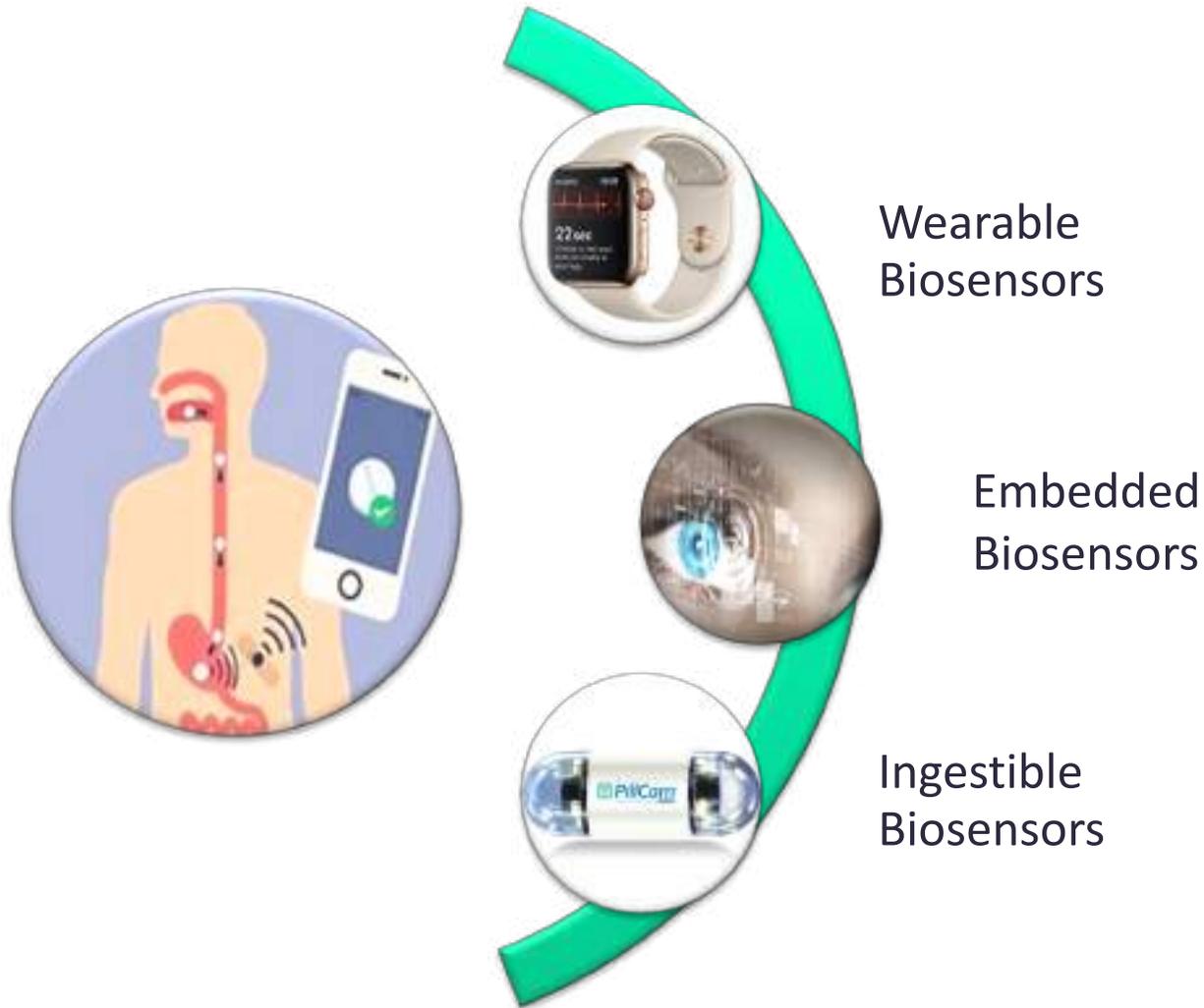
**Health &
Fitness Apps**

**Virtual and
Augmented
Reality**

Telemedicine

**Cyber
security**

Medical Biosensors likely to be ubiquitous within the next decade



Long-standing challenges such as low patient adherence are becoming addressable

Potential to profile and monitor an individual's physicochemical make-up and help precision target drug treatments

Real-world evidence of the value of biosensors is mounting

Improved population health and cost savings



Ingestible

Abilify MyCite is the first FDA-approved drug with a **digital ingestion tracking system**, essentially a drug-device combination of the antipsychotic embedded with Proteus' ingestible sensor



Skin as a platform

Researchers at Binghamton University develop a new **biosensor that mimics the skin's properties** to aid in wound healing and monitor wounds in real time.

Wearable devices have their greatest potential in healthcare



Wearables are primarily used by consumers for fitness tracking or content (e.g. hearables)...

...but in a medical context can help deliver early diagnosis, remote patient monitoring (RPM), treatment and prevention.

Healthcare use cases can have an impact across the entire value chain...

...a development that attracted the interest of not only the Healthcare industry but also players from the Insurance sector.

Health and fitness apps are still predominantly a consumer trend...

...but there are also successful uses cases in healthcare.

5bn mobile devices

3bn smartphones
that can run apps

over 318,000 Health
apps



Healthcare companies with medical health apps



Apple is quickly overtaking the diagnostic testing app market with heart sensors connected to its Apple Health app. As long as Apple continues to develop biosensors and associated apps, it will continue to dominate this market.

Virtual and Augmented Reality have many use cases in Healthcare



VR is an immersive experience that uses VR headsets to shut out the physical world where users are transported into simulated environments.

AR is less complex. It involves the addition of information such as sound, video, or graphics to enhance the real world using AR glasses or heads-up displays.

Behavioural Health

Medical Education

Healthcare Uses

R&D

Mental Health

Telemedicine can help deliver improved access and affordability

Live Video Conferencing, Remote Patient Monitoring and Mobile Health can be powerful tools in healthcare



- Telemedicine increases patient access to those who do not have a doctor nearby or are unable to travel.

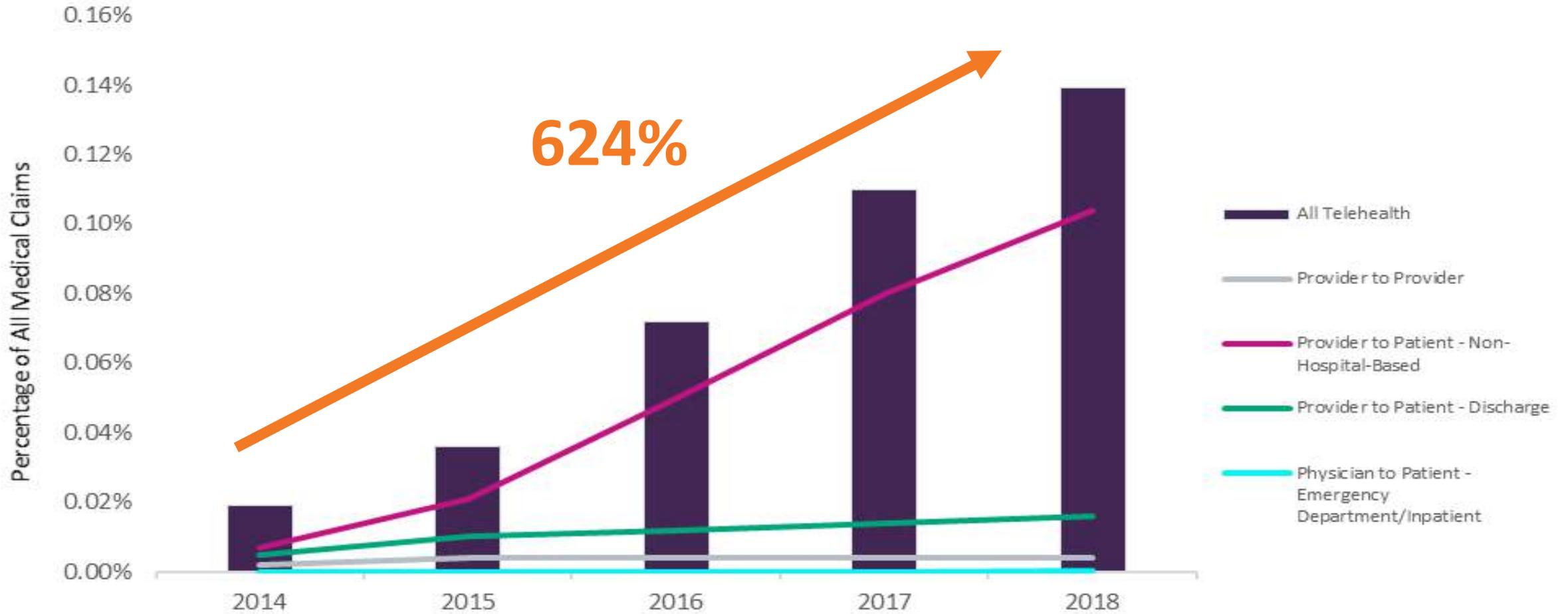


- Those who are ill do not have to travel to the doctor's office, increasing comfort for the patient and reducing the risk of spread for infectious diseases.

Telemedicine: strong growth from a low base

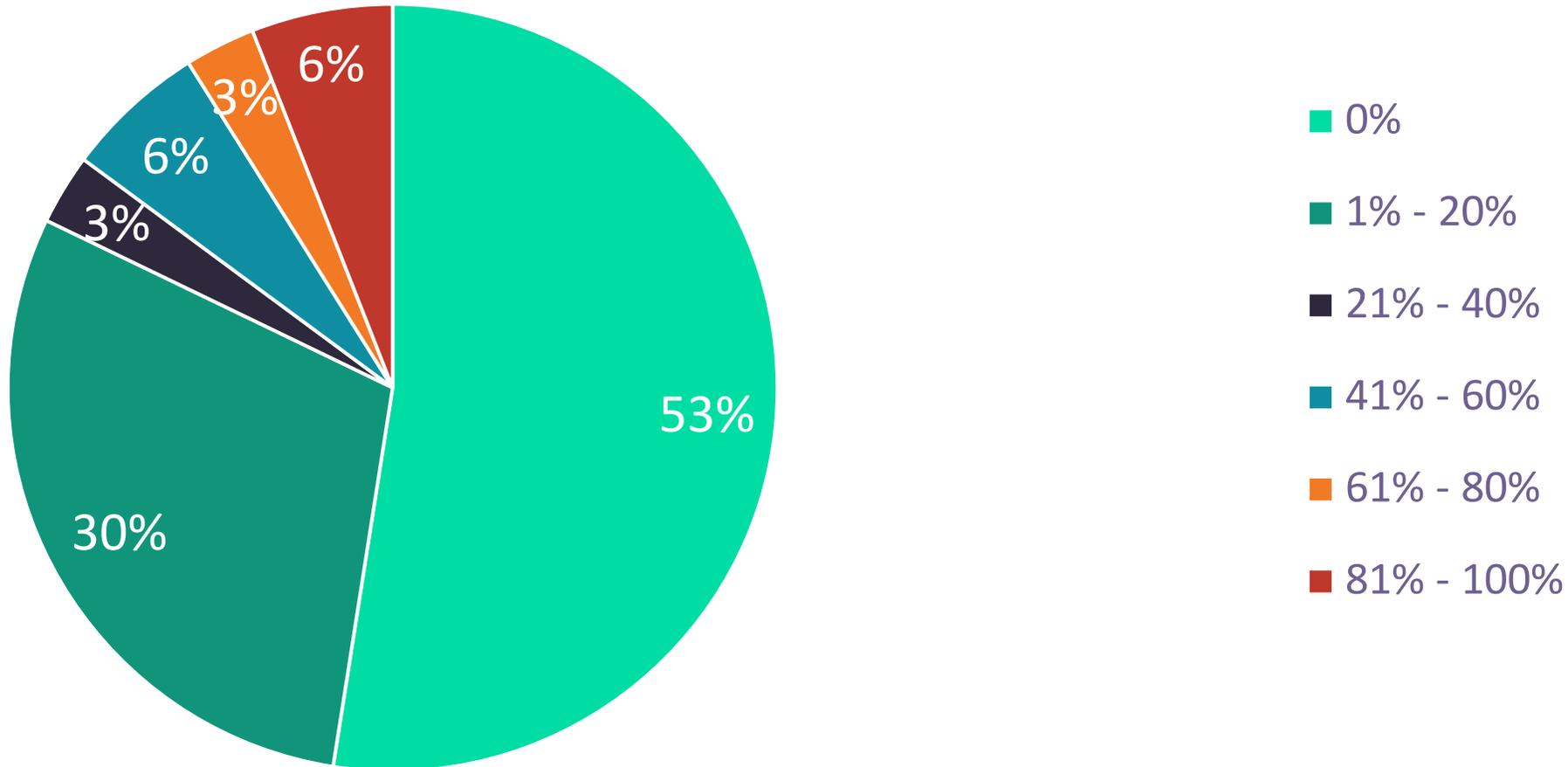


Share (%) of Telemedicine Medical Claims in the US – 2014-2018





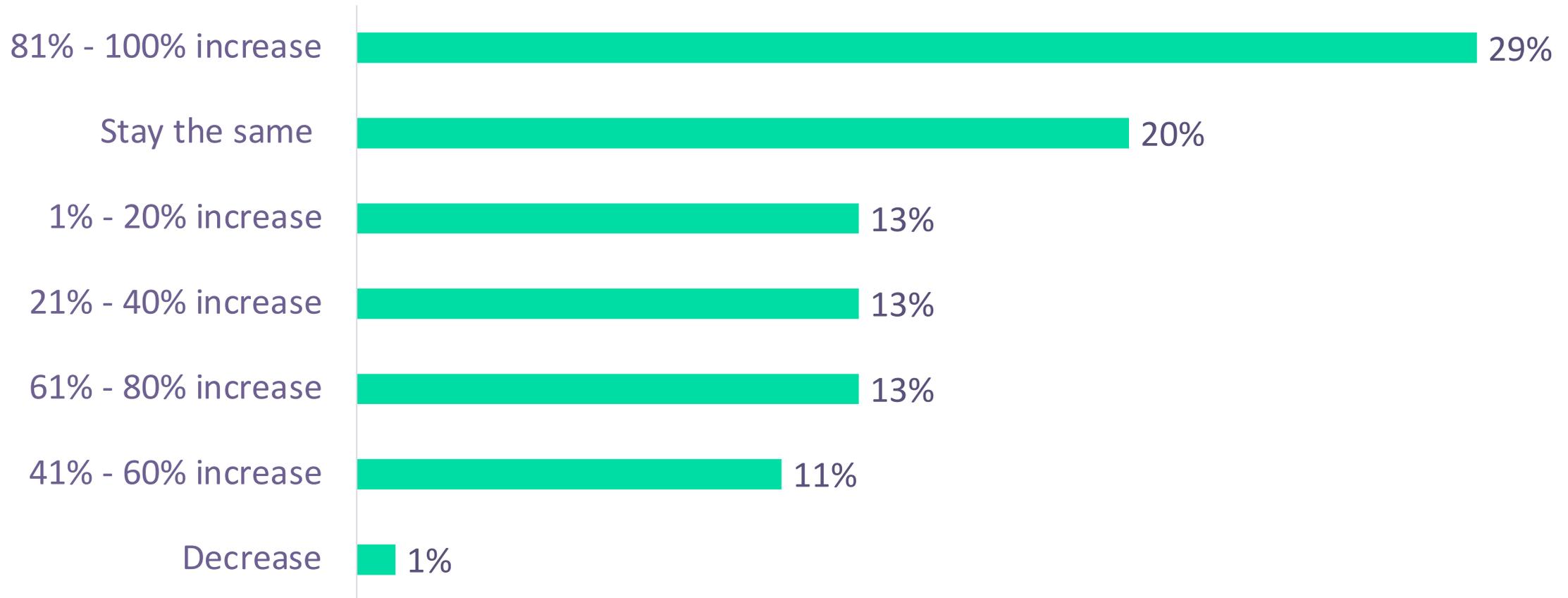
US Physicians' Use of Telemedicine Before the COVID-19 Pandemic



Q: Prior to COVID-19, what proportion of your patients did you assess/treat using telemedicine?
Source: GlobalData, 70 US specialists surveyed between 15 June and 2 July 2020



Change in the Proportion of US Physicians Using Telemedicine During the COVID-19 Pandemic



Cybersecurity becoming a business imperative

Due to digital transformation, the number of cyberattacks is only going to increase, meaning that companies need to have long-term cybersecurity strategies in place.

Network-connected devices such as pacemakers and insulin pumps, trials, hospital systems, patient records

High breach risks

of healthcare breaches in 2018

750

of medical records breached in 2018

15.1 million

of medical records breached Jan-June 2019

32 million



Cybersecurity is now central to the healthcare industry



The COVID-19 legacy

Some of the changes brought about by COVID will be here to stay



Facing off competition from big tech

Big tech companies such as Apple will continue to expand into the health space



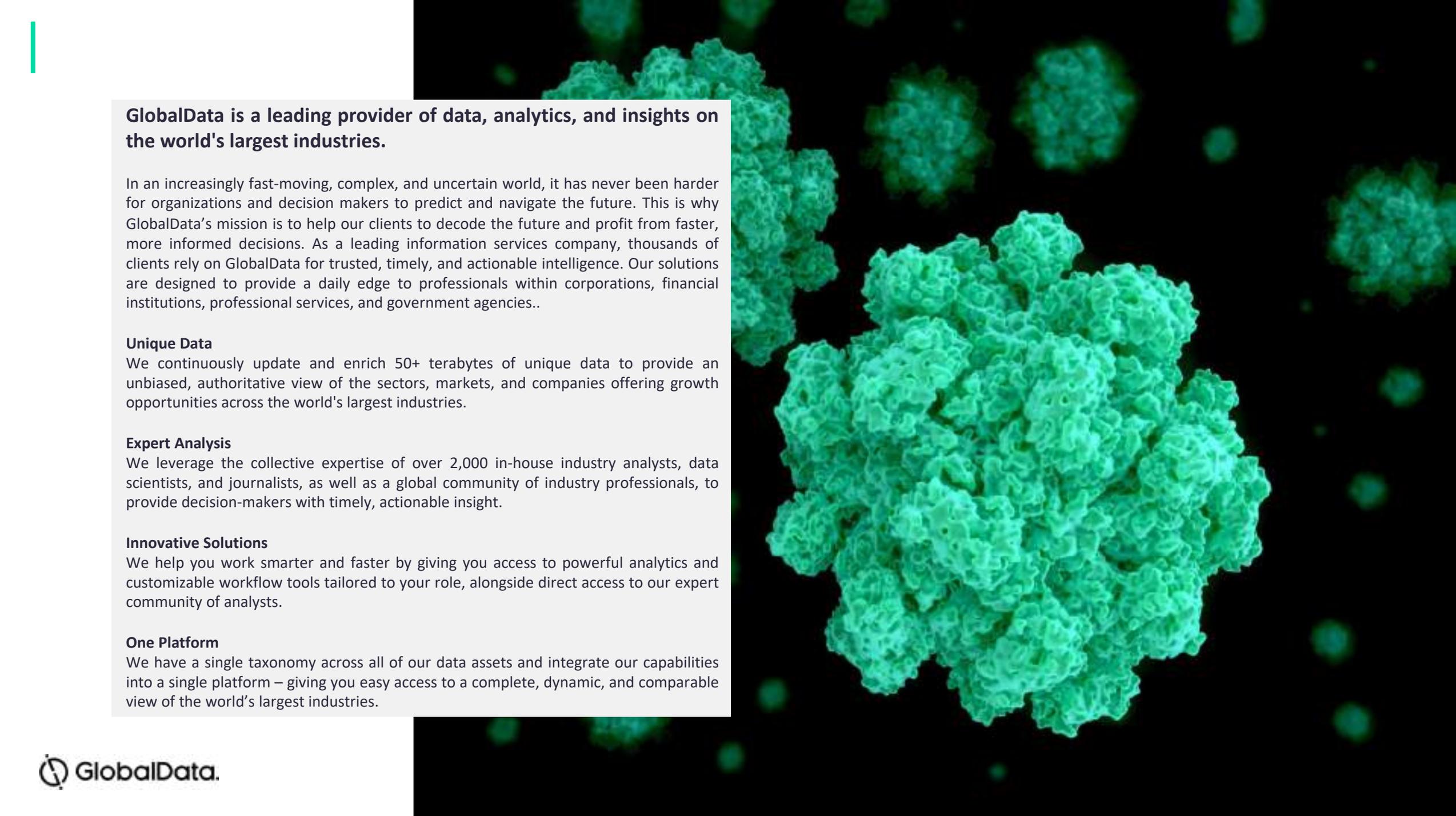
Choose the right technology solution for your business

One size does not fit all



Invest in cybersecurity

Failure to collect, store and protect customer data will damage your brand



GlobalData is a leading provider of data, analytics, and insights on the world's largest industries.

In an increasingly fast-moving, complex, and uncertain world, it has never been harder for organizations and decision makers to predict and navigate the future. This is why GlobalData's mission is to help our clients to decode the future and profit from faster, more informed decisions. As a leading information services company, thousands of clients rely on GlobalData for trusted, timely, and actionable intelligence. Our solutions are designed to provide a daily edge to professionals within corporations, financial institutions, professional services, and government agencies..

Unique Data

We continuously update and enrich 50+ terabytes of unique data to provide an unbiased, authoritative view of the sectors, markets, and companies offering growth opportunities across the world's largest industries.

Expert Analysis

We leverage the collective expertise of over 2,000 in-house industry analysts, data scientists, and journalists, as well as a global community of industry professionals, to provide decision-makers with timely, actionable insight.

Innovative Solutions

We help you work smarter and faster by giving you access to powerful analytics and customizable workflow tools tailored to your role, alongside direct access to our expert community of analysts.

One Platform

We have a single taxonomy across all of our data assets and integrate our capabilities into a single platform – giving you easy access to a complete, dynamic, and comparable view of the world's largest industries.

Statistics on the Local Healthcare Industry

	NUMBER OF HEALTH WORKERS		
	PUBLIC	PRIVATE	TOTAL
Doctors	20 214	20 561	40 775
Nurses	54 943	35 365	90 308
Midwives	39 138	3 906	43 044
Medical technologists	7 071	6 342	13 413

	NUMBER OF HEALTH CARE FACILITIES IN THE COUNTRY		
	TOTAL	GOVT	PRIVATE
Barangay Health Station	25077	25076	1
Rural Health Unit	2592	5592	0
Birthing Home	2023	885	1138
Hospital	1474	466	1008
Infirmery	685	346	339
City Health Office	10	10	0

Source: 2019 Philippine Statistical Yearbook, Department of Health (Health Care Facilities), Food and Drugs Administration (Licensed Drug Distributors), Department of Finance – Insurance Commission (HMOs), Asia Pacific Observatory on Health Systems and Policies: The Philippine Health System in Review

Local Current Happenings



**STRAINED
HEALTHCARE WORKERS**



**LACKING
MEDICAL RESOURCES**



**TELCO & ICT
RESPONSE**

"Healthcare for all"

Making quality healthcare services to available to all Filipinos, wherever and whenever they need it, and with whatever media they use.

COVID-19 Must-Know: Patient Pathway

It all
 Starts with
 Telemedicine

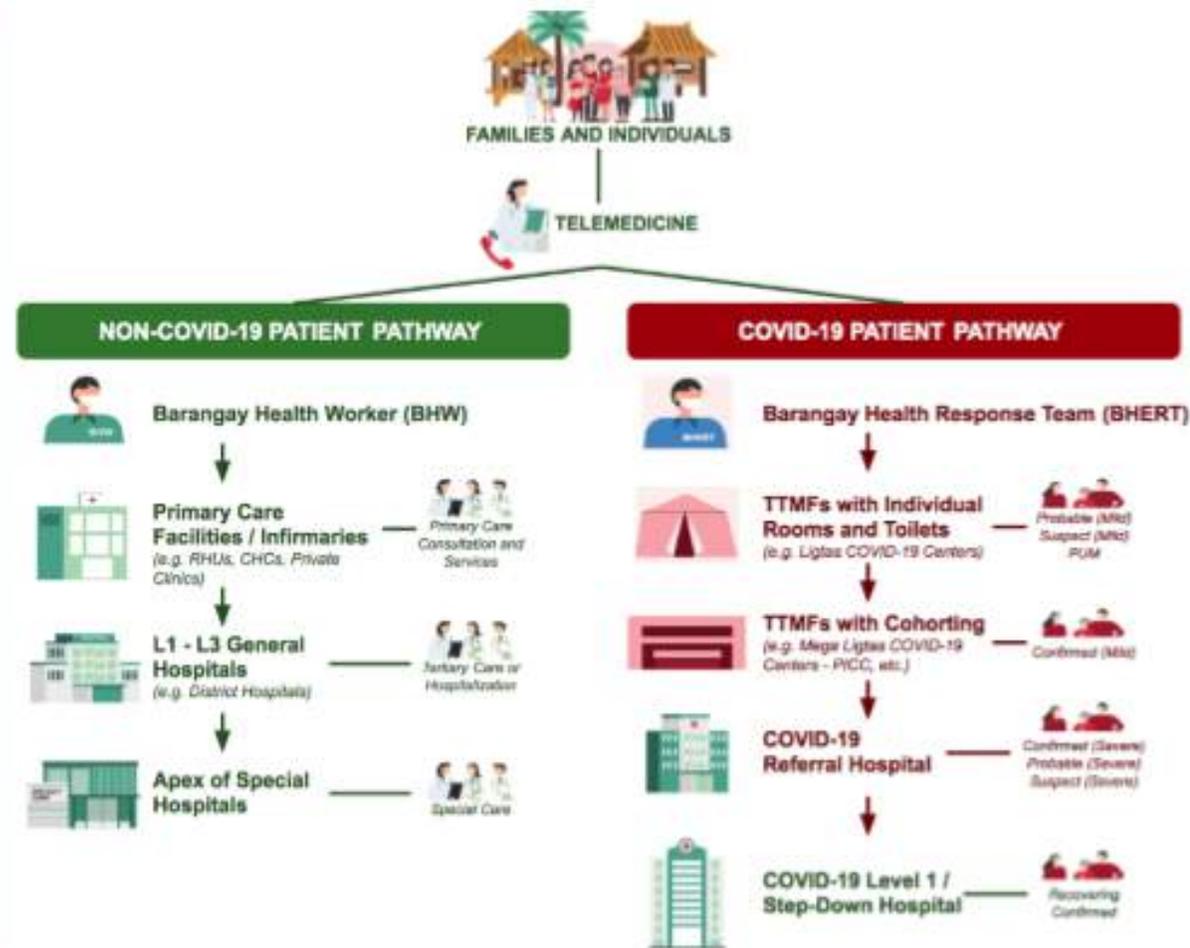


Figure 3. DOH slide from a presentation on the new normal in health systems, showing pathways of patients with and without COVID-19. Leveling of care is equally important in either pathway.

"Healthcare for all"

**Safer and
wider access
to healthcare**

1

Providing secure and convenient access to healthcare services wherever you are

**Better
Patient Outcomes**

2

Creating better patient results with the smart use of patient information, and new tech-based practices

**Secure
and Efficient
Healthcare Systems**

3

Operational convenience with integration to other platforms like payments and related medical organizations & peers

"Healthcare for all"

**Safer and wider access
to healthcare**



Focus on Access to
Healthcare Services

**Online Consultation
Schedule & Booking
Remote Monitoring**

**Better
Patient Outcomes**



Focus on Management
of Healthcare Records

**Smarter use of Patient
Data
Strategic
Documentation
Cybersecurity**

**Secure and
Efficient Healthcare
Systems**



Focus on System
Integration &
Collaboration

**Digital Medical
Database
Online Payment Option
Hospital Management
System**

OPTION A
Assisted Start



1

Call Hotline
& Provide Info

2

Triage screening
& Scheduling

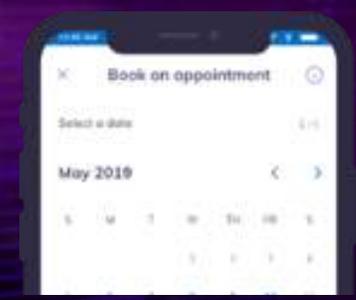
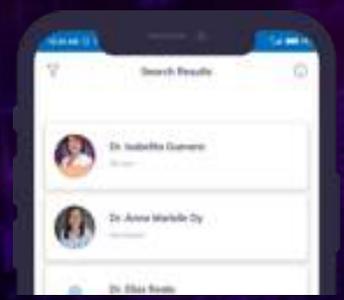


3

TeleConsultation
Proper

Patient will be able to
see doctor through
his/her tablet/phone

OPTION B
Self-Service



1

Via Mobile App
Search for
Doctors

2

Via Mobile App
Book schedule



4

**E-Prescription or
E-Referral**

Patient may receive a Digital Prescription or referral slip for additional tests

5

**Partner Drug Stores
& Pharmacies**

Patient may send prescription in advance to partner drug stores to pick up medication or have it delivered

6

**Partner Laboratories
& Test Centers**

Patient may send referral slip in advance and schedule a test to partner labs and test centers



**HAPPY &
LOYAL**

PATIENT COMMUNITY

7

**Integration with
HMOs & PhilHealth**

On-going development for the integration of HMOs and PhilHealth to our Solution

8

**Remote Patient
Monitoring**

Remote Patient may avail of hardware solutions that can track and monitor their health regularly

Remote Patient Monitoring – ACCU-CHEK® Diabetes Care



Features:



Automatic blood sugar tracking, food and medication logging, and activity tracking with graphs



Quick and easy logging of meals, diet, medications, carbohydrates, blood glucose levels and more



Automatically synchronized BG values



Secure tracker data backup with daily, weekly, monthly analysis



Estimated HBA1c at a glance



Integration via bluetooth

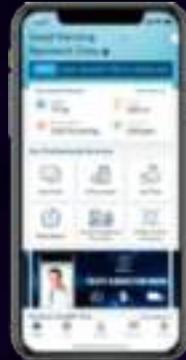


Insulin calculations



<https://youtu.be/Hw1g0M-7Qmw>

TELEHEALTH COMMON BUSINESS MODEL



Telehealth
Enabler



**Business to
Consumer**

Monthly fee +
Charge per
Consultation



Business to Doctor

RevShare per
Consultation



**Business to
Business**

Monthly
Subscription

1

2

3



e HEALTH

Online Consultation
Advance Booking
Calendar visibility
Online Payment



Digital Prescription
Lab Referral
SMS/Email Notification
Collaborations



e HEALTH

- Always-On 24/7 service
- Cross beyond the limits of physical office
- Alleviate hospital crowding
- Increase transaction frequency
- Increase health protection
- Increase risk mitigation
- Capture steady influx of patient and clients





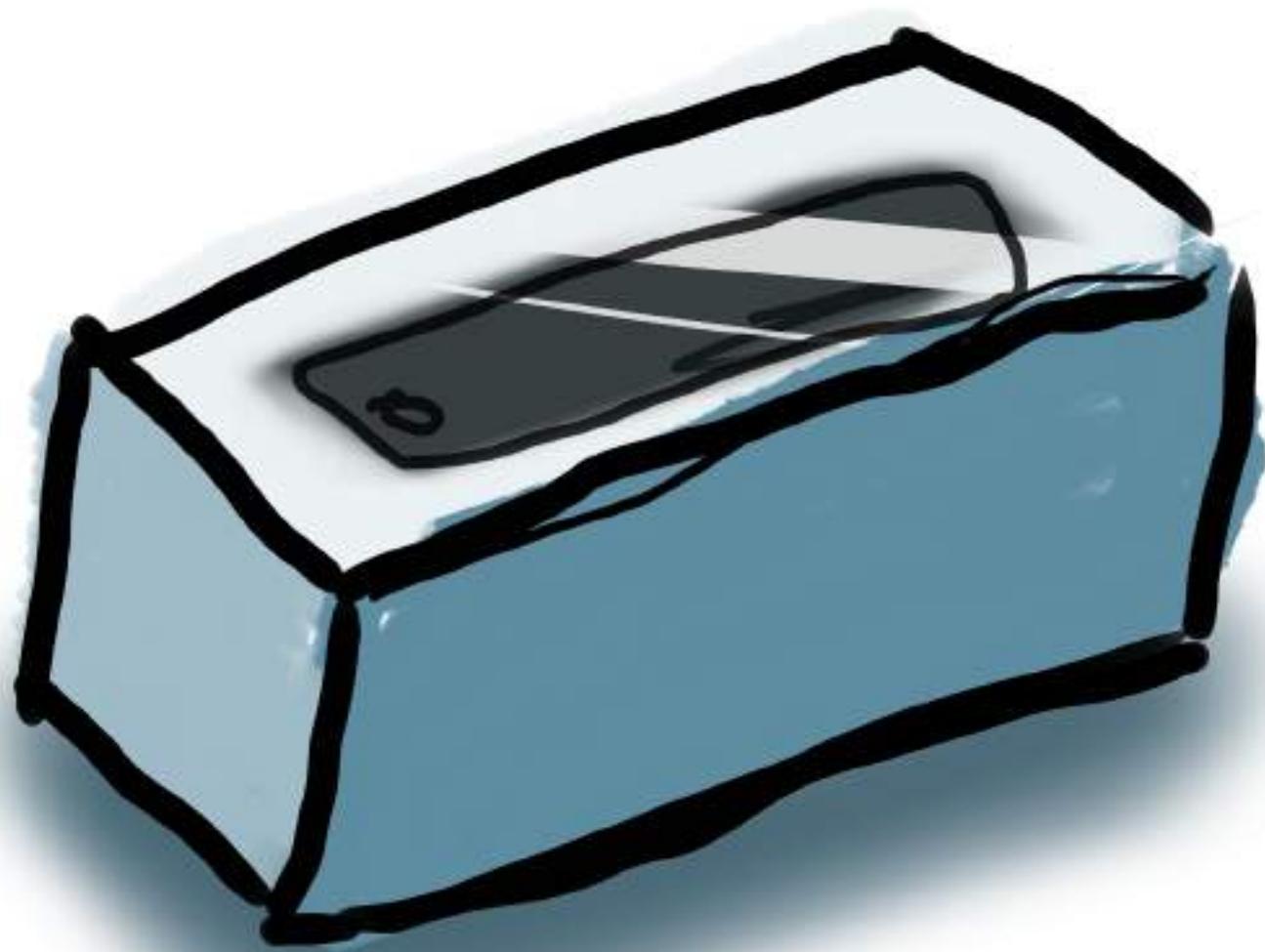
 **PLDT**  **Smart**

**CONNECTIVITY & TOUCH POINT
(Fixed & Wireless)**

ePLDT

**MOBILE APP
(ICT Cloud Solution)**

Tom Hiatt
World Health Organization





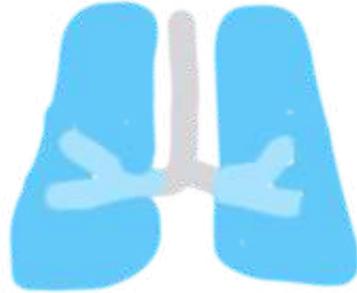
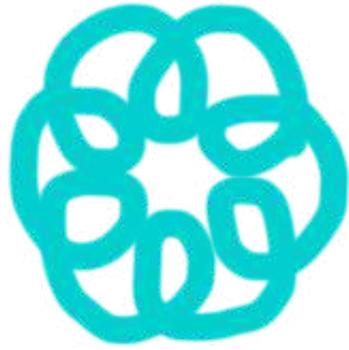




HELLO



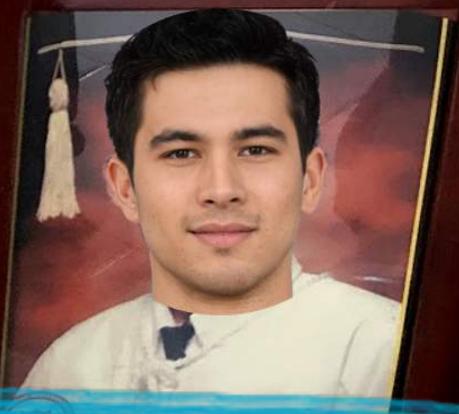
Exposure Notifications >

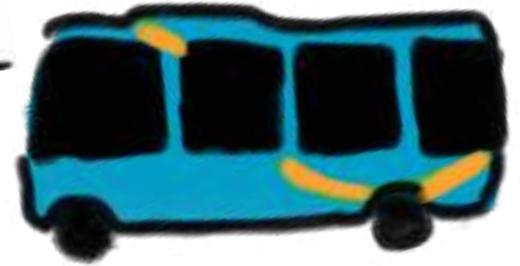


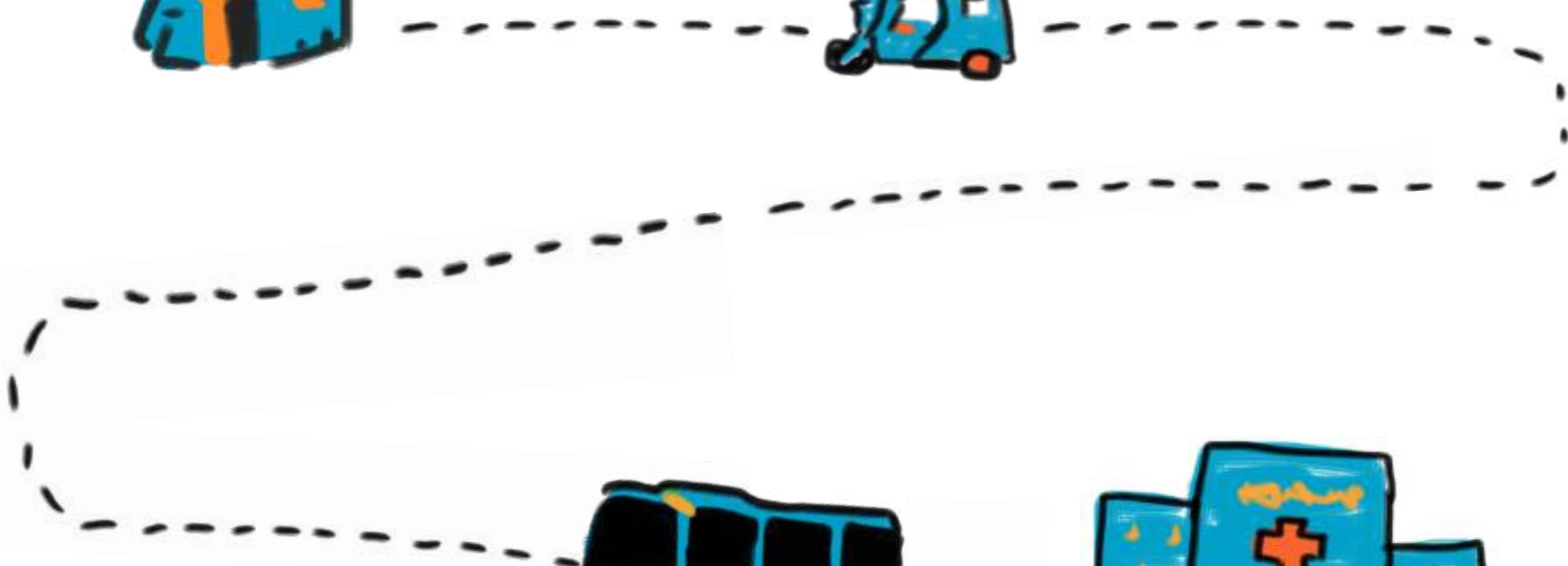
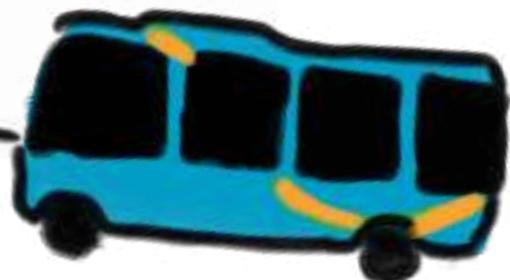




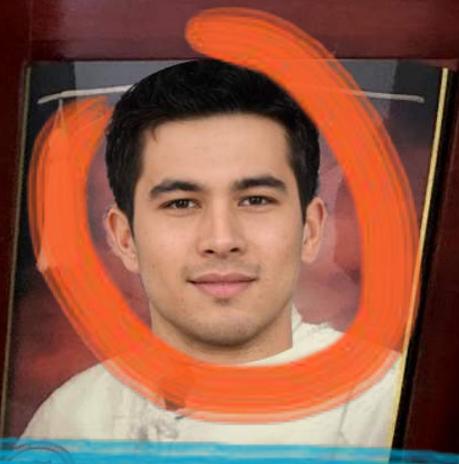
SAVE LIVES
IMPROVE LIVES



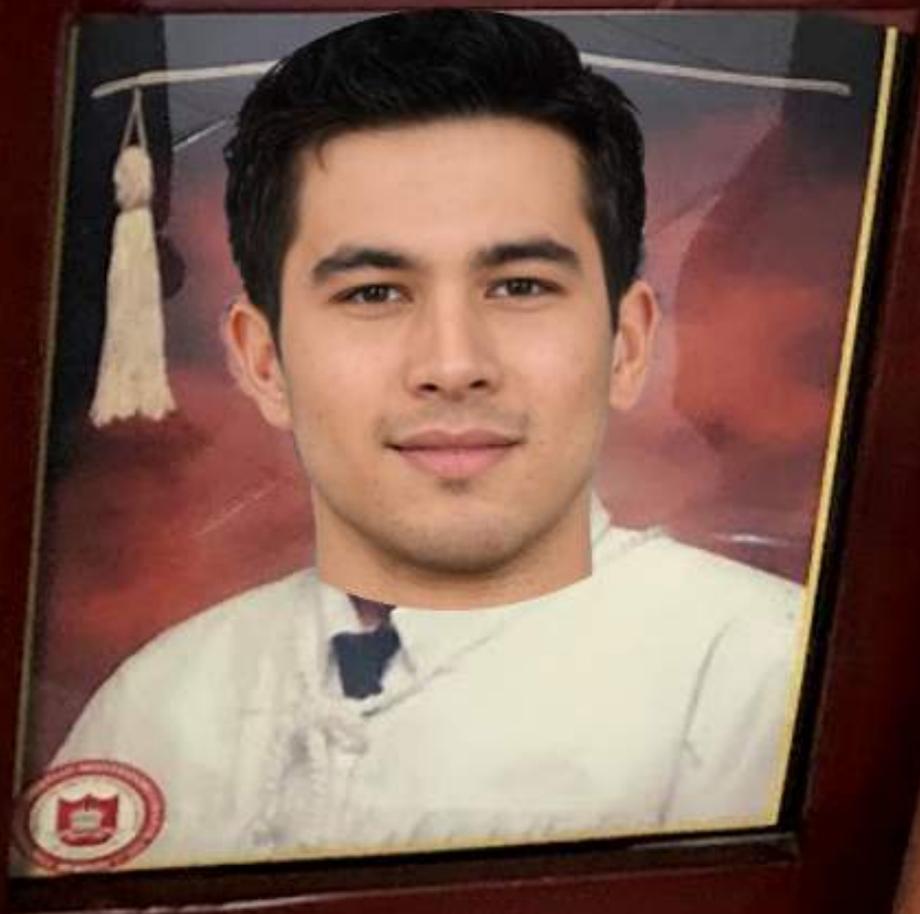








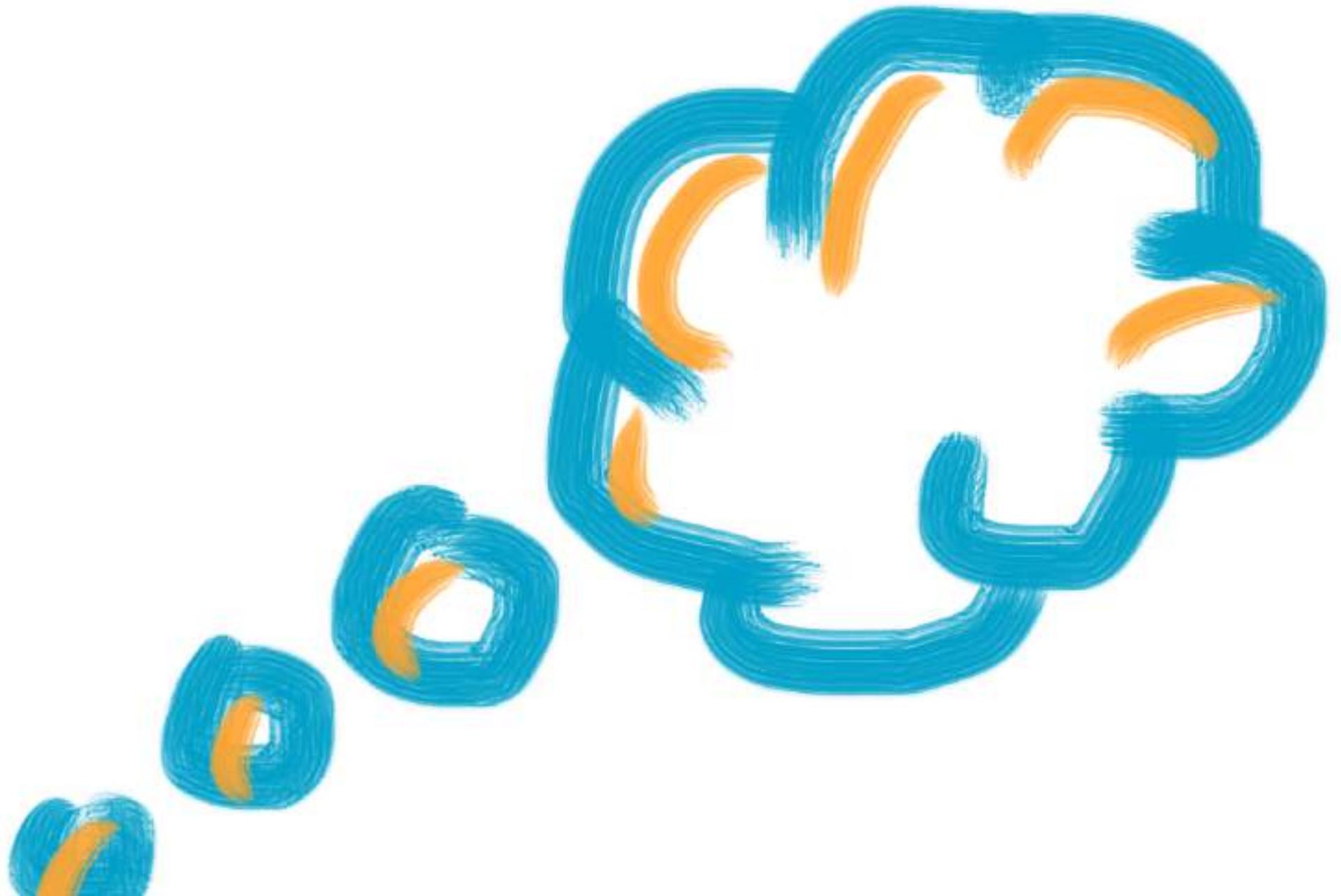












SAVE LIVES
IMPROVE LIVES



SAVE LIVES
IMPROVE LIVES

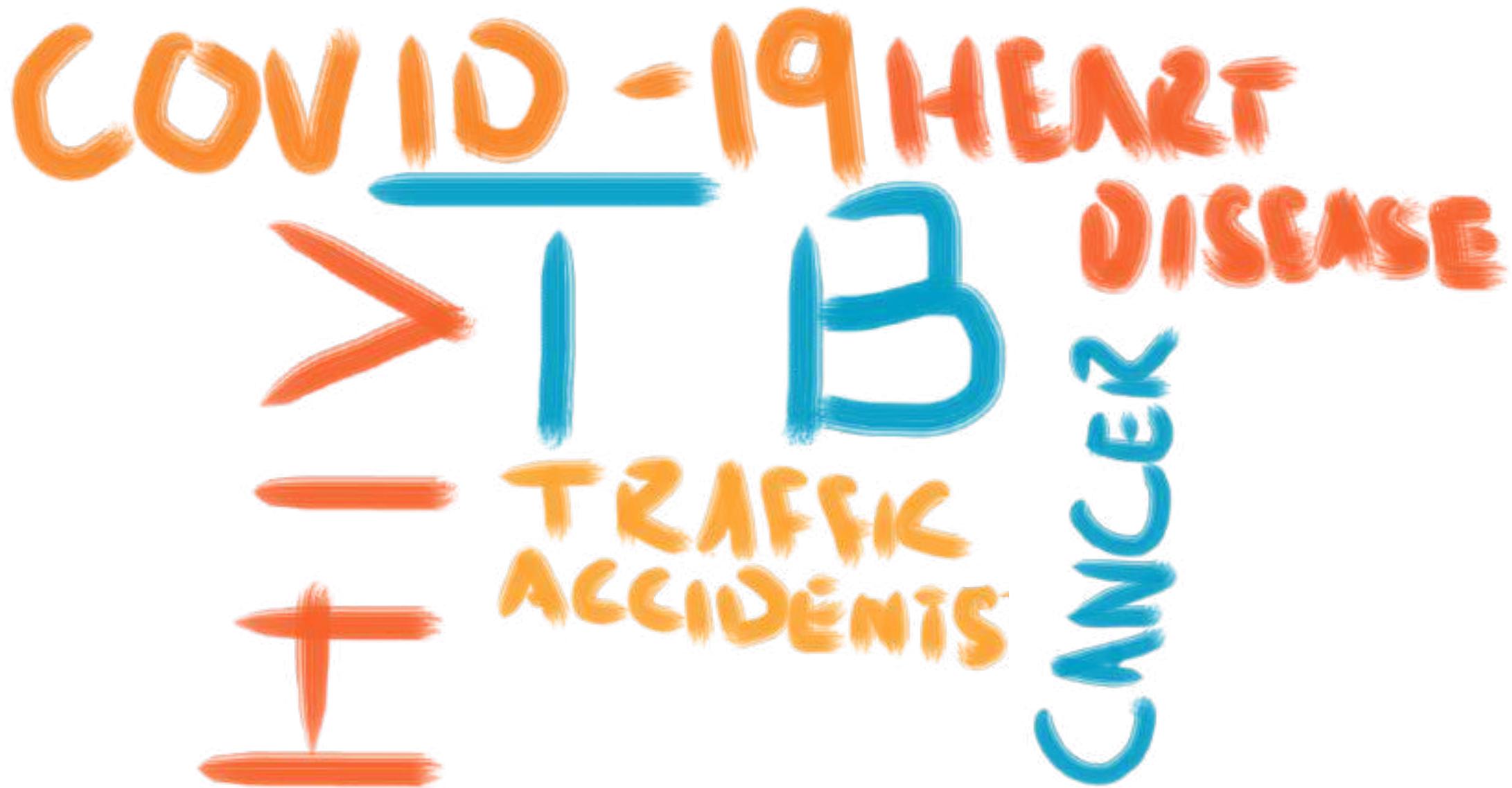




2021

2025

2030



SAVE LIVES
IMPROVE LIVES



**METRO
PACIFIC**
HEALTH TECH

Integrated Healthcare in The Hands of Every Filipino

Digitizing Health Care

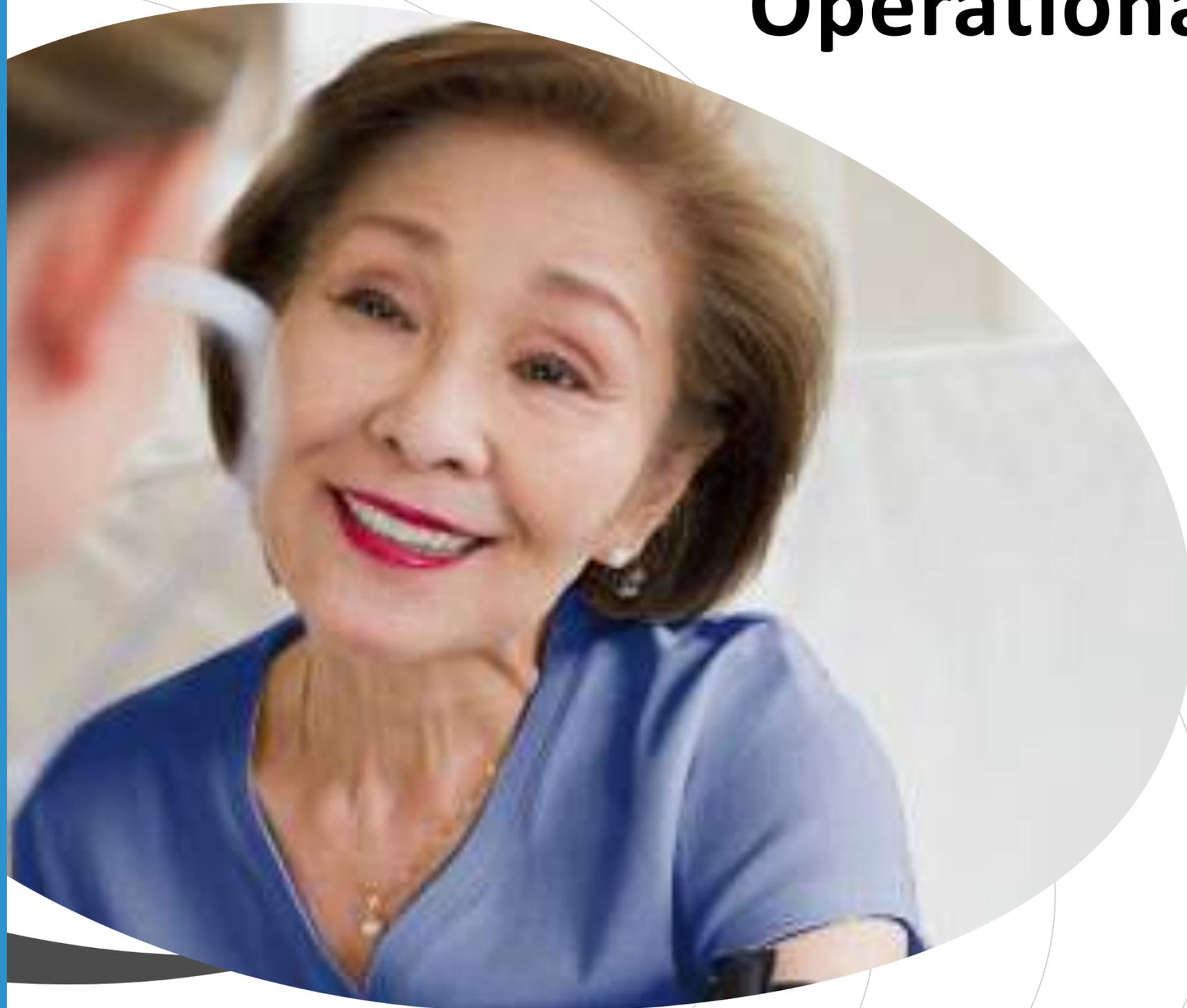
- Journey Based Experiences
- End to End
- Integrated Physical and Virtual Care
- Outcome driven



Experience Layer

Operational Level

- Drives Efficiencies
- Lowers Cost
- Unlocks new business models
- Real time information

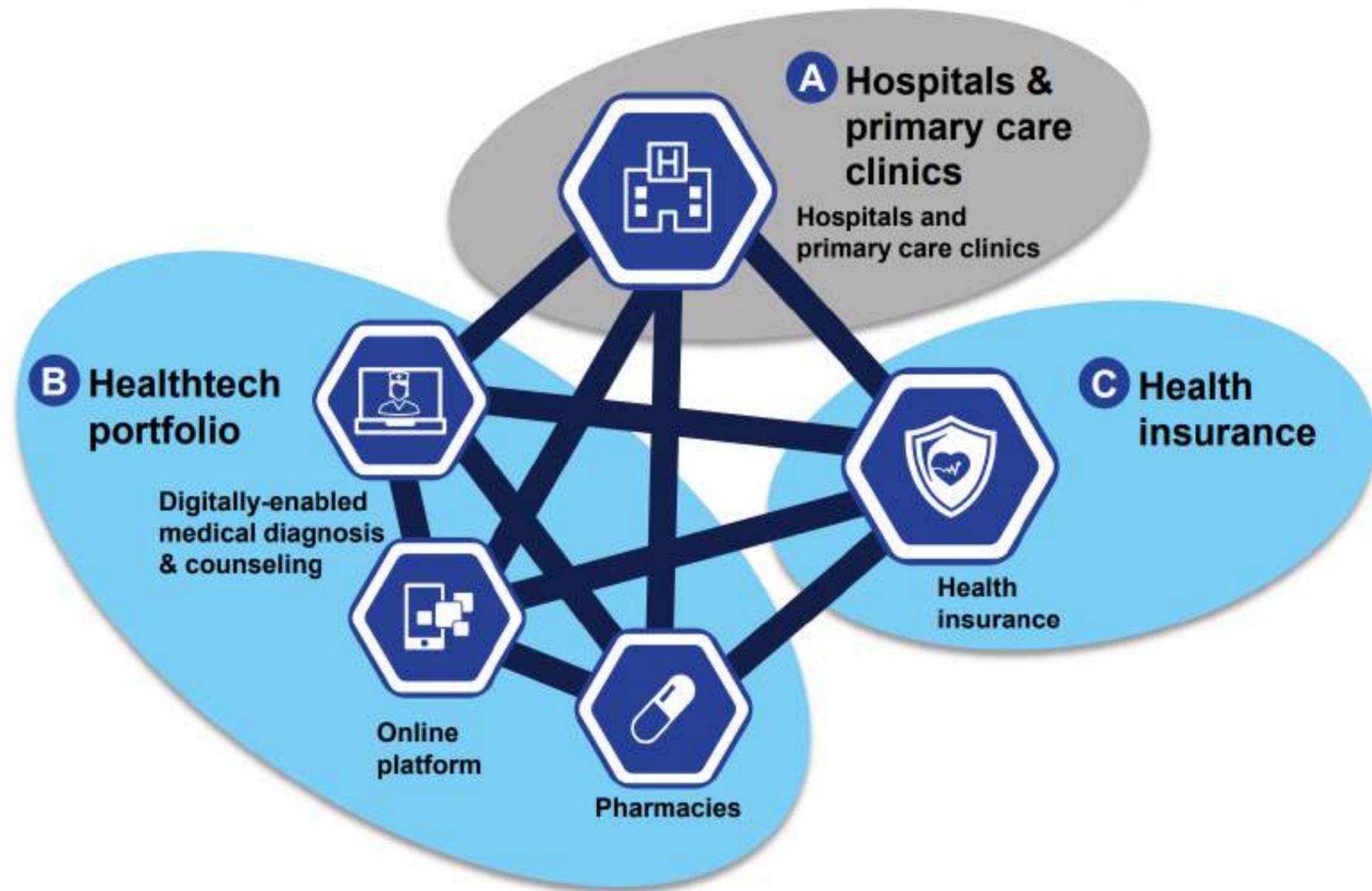


- New Digital Services
- Artificial Intelligences
- Data and Machine Learning
- Remote Care and IOT



Innovation

Digital Connects driving Value across the ecosystem





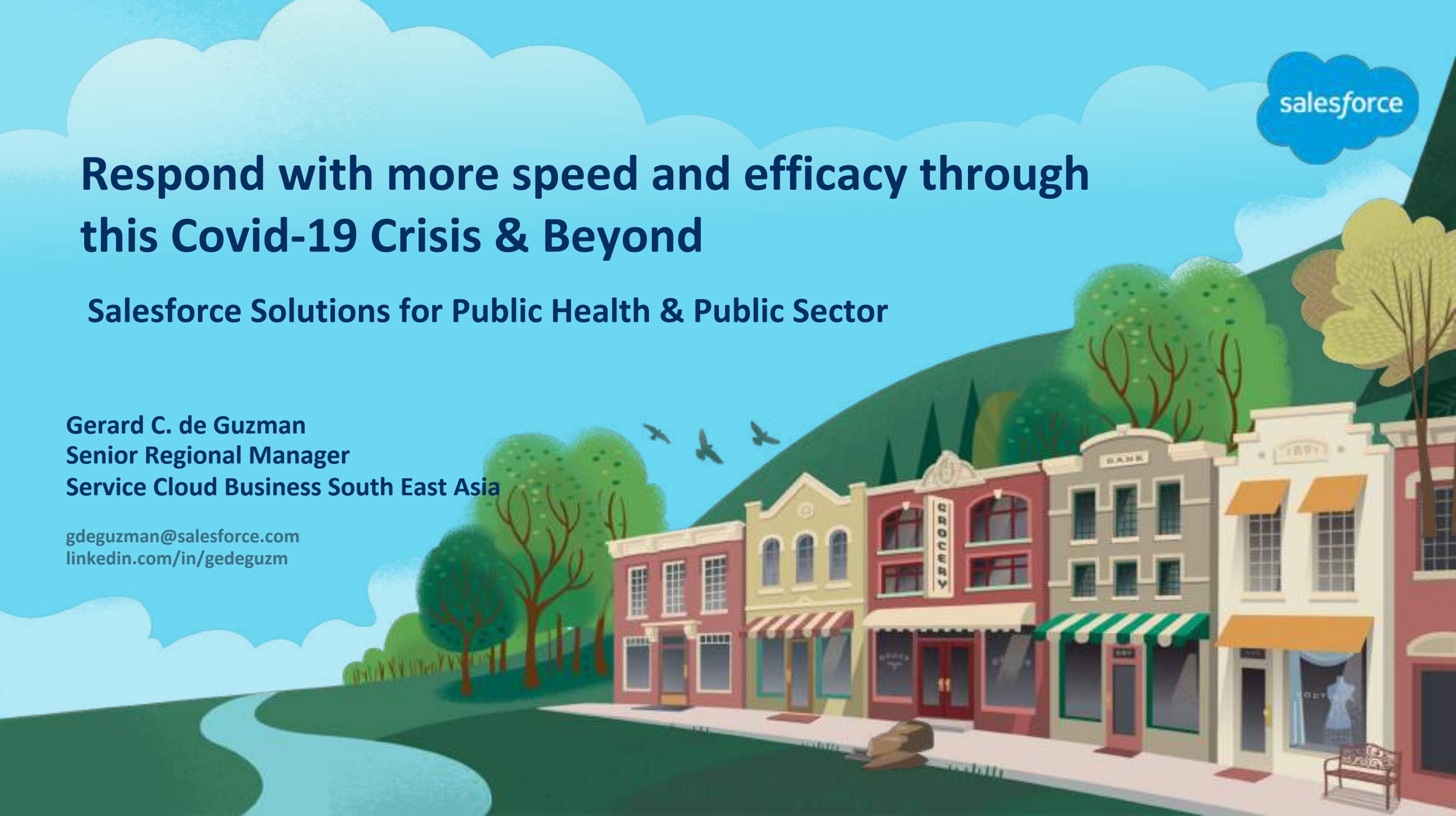
salesforce

Respond with more speed and efficacy through this Covid-19 Crisis & Beyond

Salesforce Solutions for Public Health & Public Sector

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The risks and uncertainties referred to above include -- but are not limited to -- risks associated with the effect of general economic and market conditions; the impact of geopolitical events; the impact of foreign currency exchange rate and interest rate fluctuations on our results; our business strategy and our plan to build our business, including our strategy to be the leading provider of enterprise cloud computing applications and platforms; the pace of change and innovation in enterprise cloud computing services; the seasonal nature of our sales cycles; the competitive nature of the market in which we participate; our international expansion strategy; the demands on our personnel and infrastructure resulting from significant growth in our customer base and operations, including as a result of acquisitions; our service performance and security, including the resources and costs required to avoid unanticipated downtime and prevent, detect and remediate potential security breaches; the expenses associated with our data centers and third-party infrastructure providers; additional data center capacity; real estate and office facilities space; our operating results and cash flows; new services and product features, including any efforts to expand our services beyond the CRM market; our strategy of acquiring or making investments in complementary businesses, joint ventures, services, technologies and intellectual property rights; the performance and fair value of our investments in complementary businesses through our strategic investment portfolio; our ability to realize the benefits from strategic partnerships, joint ventures and investments; the impact of future gains or losses from our strategic investment portfolio, including gains or losses from overall market conditions that may affect the publicly traded companies within our strategic investment portfolio; our ability to execute our business plans; our ability to successfully integrate acquired businesses and technologies; our ability to continue to grow unearned revenue and remaining performance obligation; our ability to protect our intellectual property rights; our ability to develop our brands; our reliance on third-party hardware, software and platform providers; our dependency on the development and maintenance of the infrastructure of the Internet; the effect of evolving domestic and foreign government regulations, including those related to the provision of services on the Internet, those related to accessing the Internet, and those addressing data privacy, cross-border data transfers and import and export controls; the valuation of our deferred tax assets and the release of related valuation allowances; the potential availability of additional tax assets in the future; the impact of new accounting pronouncements and tax laws; uncertainties affecting our ability to estimate our tax rate; uncertainties regarding our tax obligations in connection with potential jurisdictional transfers of intellectual property, including the tax rate, the timing of the transfer and the value of such transferred intellectual property; the impact of expensing stock options and other equity awards; the sufficiency of our capital resources; factors related to our outstanding debt, revolving credit facility and loan associated with 50 Fremont; compliance with our debt covenants and lease obligations; current and potential litigation involving us; and the impact of climate change, natural disasters and actual or threatened public health emergencies.

Further information on these and other factors that could affect the company's financial results is included in the reports on Forms 10-K, 10-Q and 8-K and in other filings it makes with the Securities and Exchange Commission from time to time. These documents are available on the SEC Filings section of the Investor Information section of the company's website at.

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THANK YOU



We're in the Midst of a Global Crisis

But emergencies can happen anywhere, any time

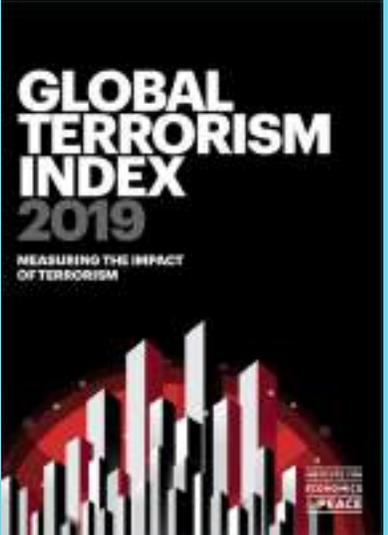
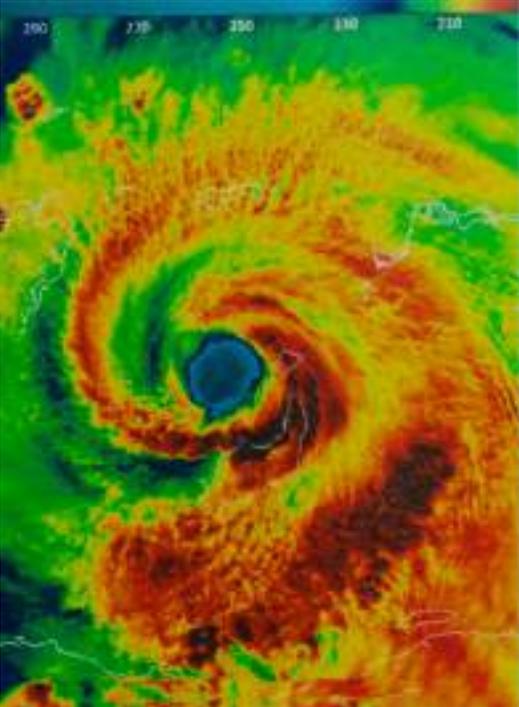
Public Health Crises



Natural Disasters



Matters of Public Safety





Common Challenges for Emergency Responders

Access to insights and organizational agility are critical during crisis response



How do you **gather and analyze massive amounts of data** to inform action plans?



How do you provide the public with **real-time access to trusted information**?

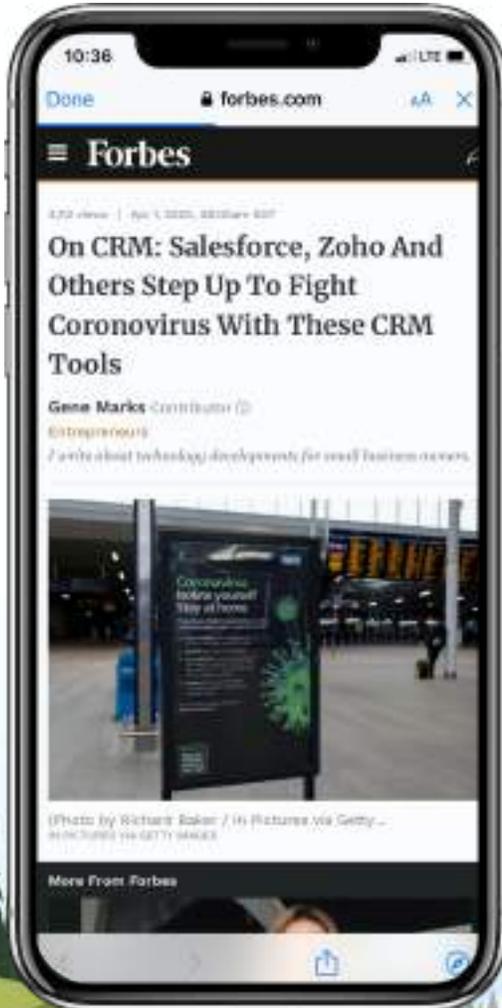


How do you **mobilize emergency services** quickly and effectively?





In times of crisis, the ability to mobilize and execute quickly can make a significant difference



● United States

● International

● Public Sector

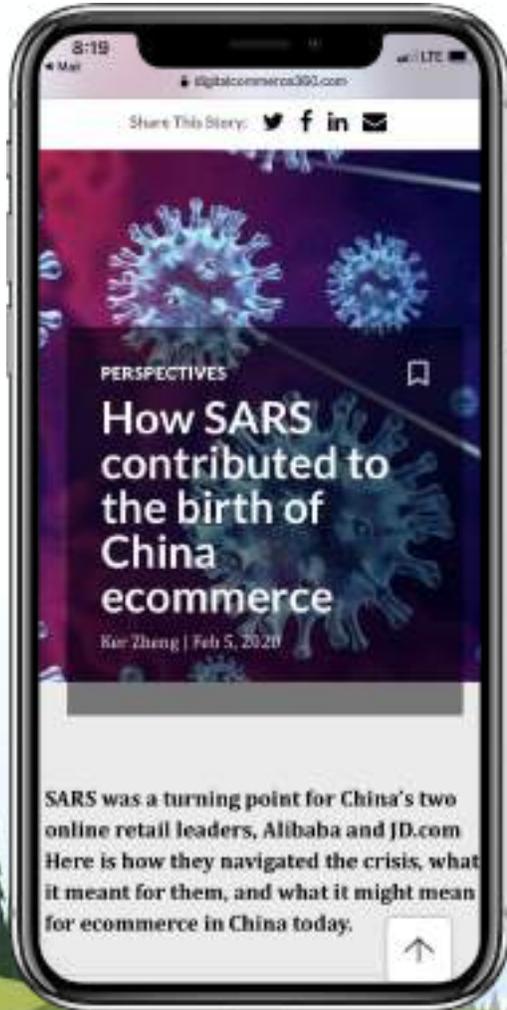
USE-CASES

- Call center scaling
- Contact tracing and surveillance
- Remote / virtual care
- Remote employee support
- Bed, supplies, and staffing capacity predictions
- Supply-chain management
- Drive-through testing
- Crowd-sourced supply donations
- Crisis communications
- Triage, Screenings

.....



COVID-19 will fundamentally change the way healthcare and life sciences organizations operate



Coronavirus

will contribute to accelerating:

Providers



Virtual health

Payers



Ecosystem partners

Medical Device



Digital selling

Pharma



Fast innovation





With a preparedness infrastructure in place, we will be ready to combat – or even prevent – the next public health crisis



Data as a Platform

will help customers:

- ✓ Receive, aggregate, and structure mass amounts of data
- ✓ Use their data to monitor, predict, and react to trends

Public Health Use-Case



1
Flag irregular symptoms before human detection

2
Alert medical institutions to spikes of people with the same symptoms

3
Prompt institutions to test for an early cure; keep the public better informed

Salesforce solution:

An open, populated, and intelligent platform

Collaboration among users

People, employees, facilities, authorities, IoT

Integrated supply chain management

Service and business continuity

Data ecosystem fueled by user interactions

Aggregated data powered by AI

Foresight through simulation

Digital twin to identify corrosion and prompt replacement



Emergency Response Management for Public Health



Protect communities and provide personalized patient care at scale

Contact Tracing

Assess potential exposure to communities and conduct ongoing monitoring of confirmed patients

Patient Triage and Evaluation

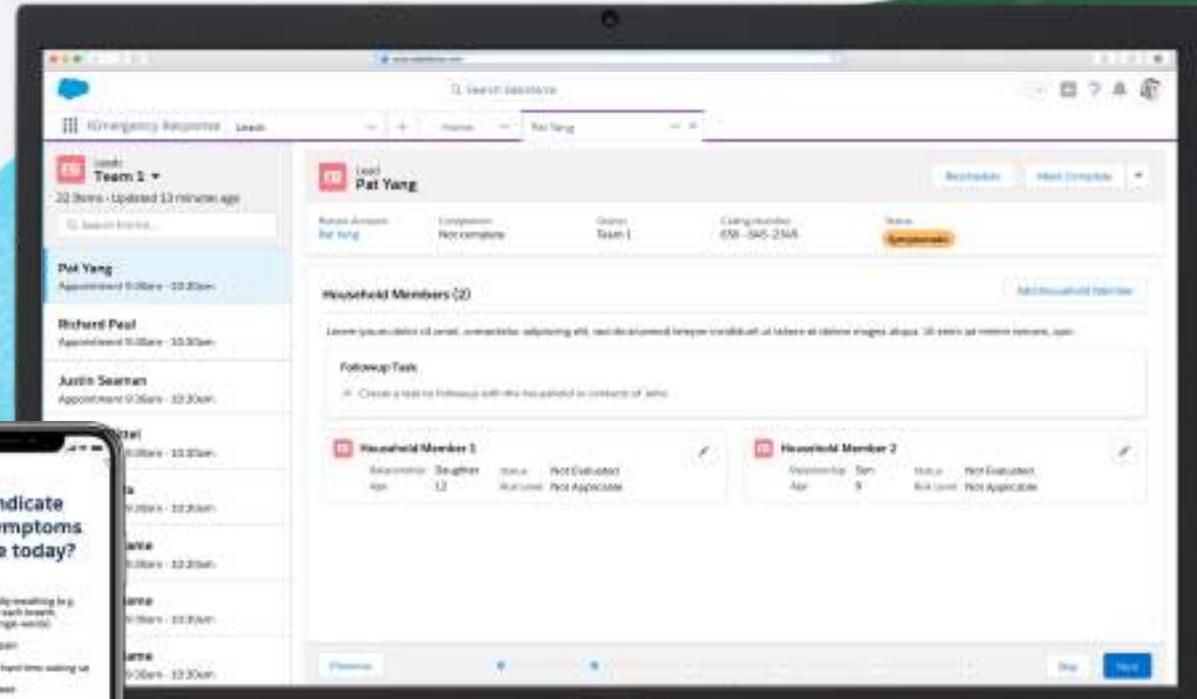
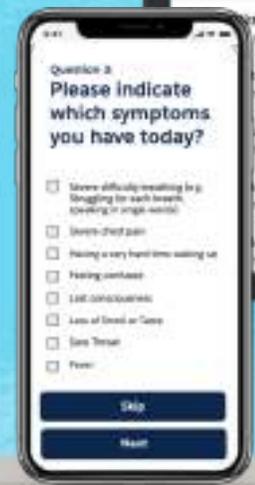
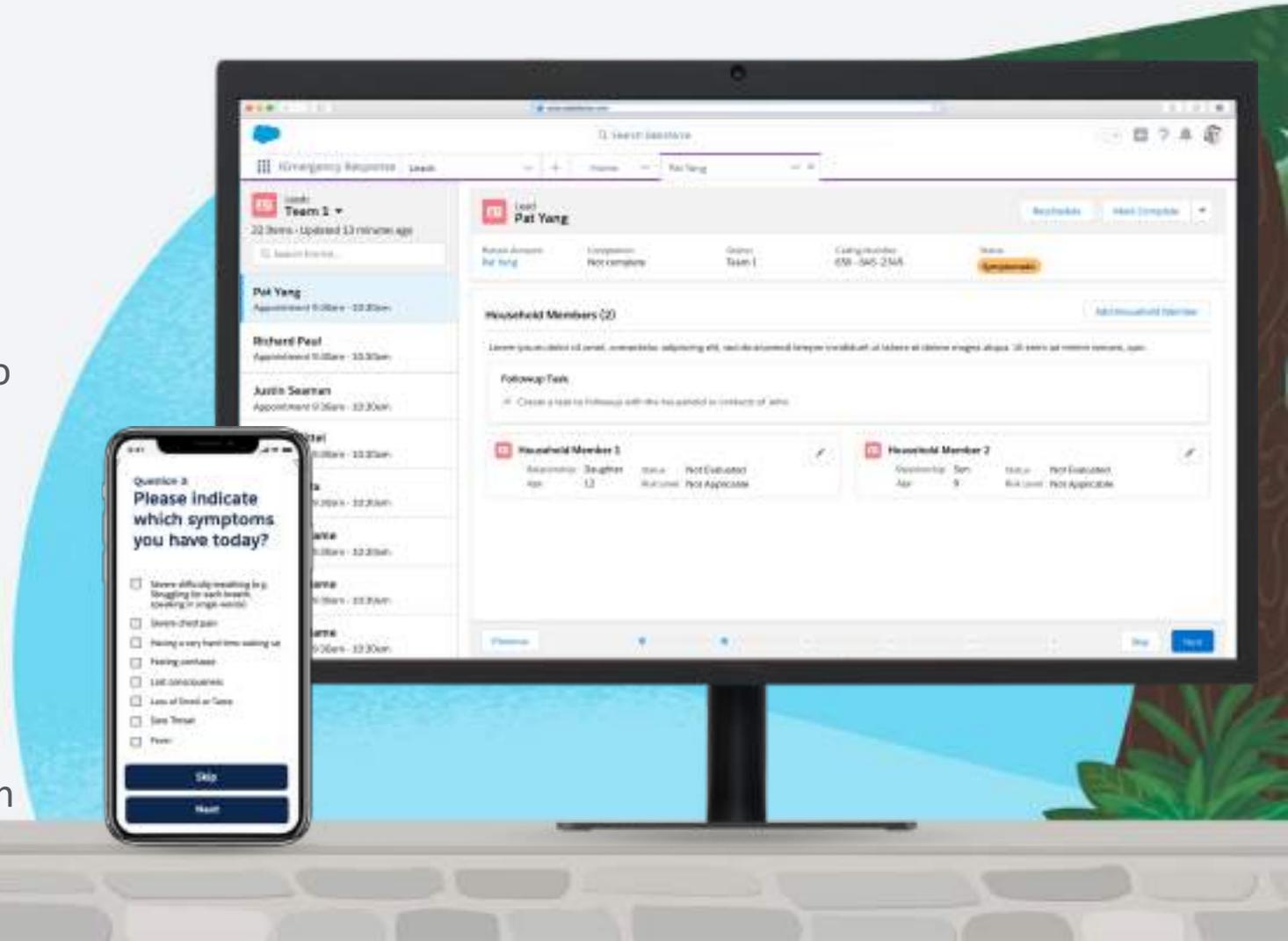
Amplify reach with self-service and digital tools to identify, assess, and interact with patients

Patient Engagement and Monitoring

Empower care teams to remotely monitor and quickly connect patients to the right care

Emergency Response Services Execution

Deliver emergency services effectively available in Emergency Response for Public Sector



Emergency Response Management for Public Sector



Quickly prioritize and mobilize resources in response to any emergency

Comprehensive View of Emergency Request Lifecycle

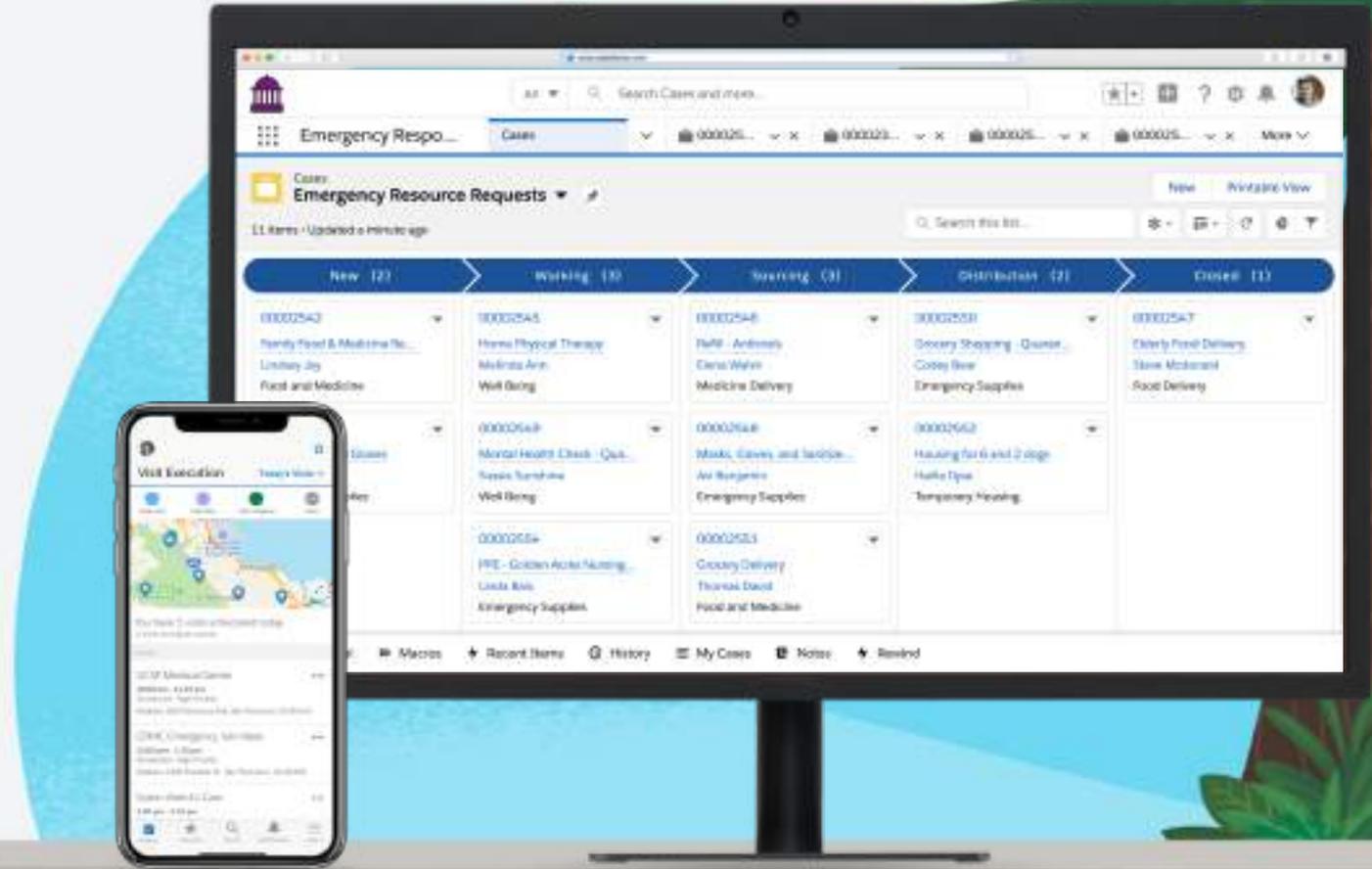
Increase collaboration with shared view of requests from intake through resolution

Prioritize & Mobilize Resources Faster

Accelerate request reviews and approvals with workflows and notifications

Empower Field Response Workers

Support visit planning, scheduling, and services execution, all available on a mobile device

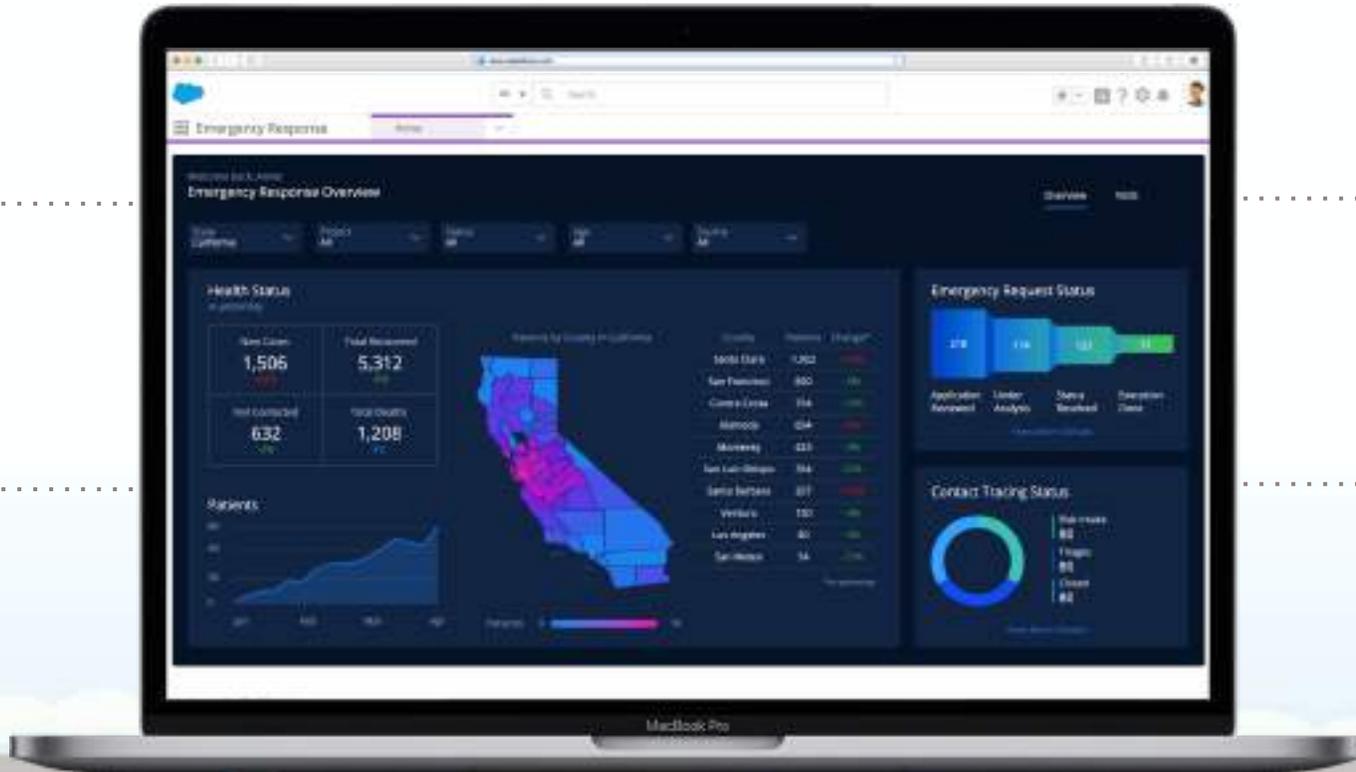


Actionable Insights in Your Response Workflow

Einstein Analytics for Emergency Response Management



Available May 19



Interactive dashboards & data visualizations

Take action at the point of insight

Holistic view of trends across intake, patients, and visits

Identify & resolve bottlenecks in emergency request process

Transform Constituent & Community Engagement

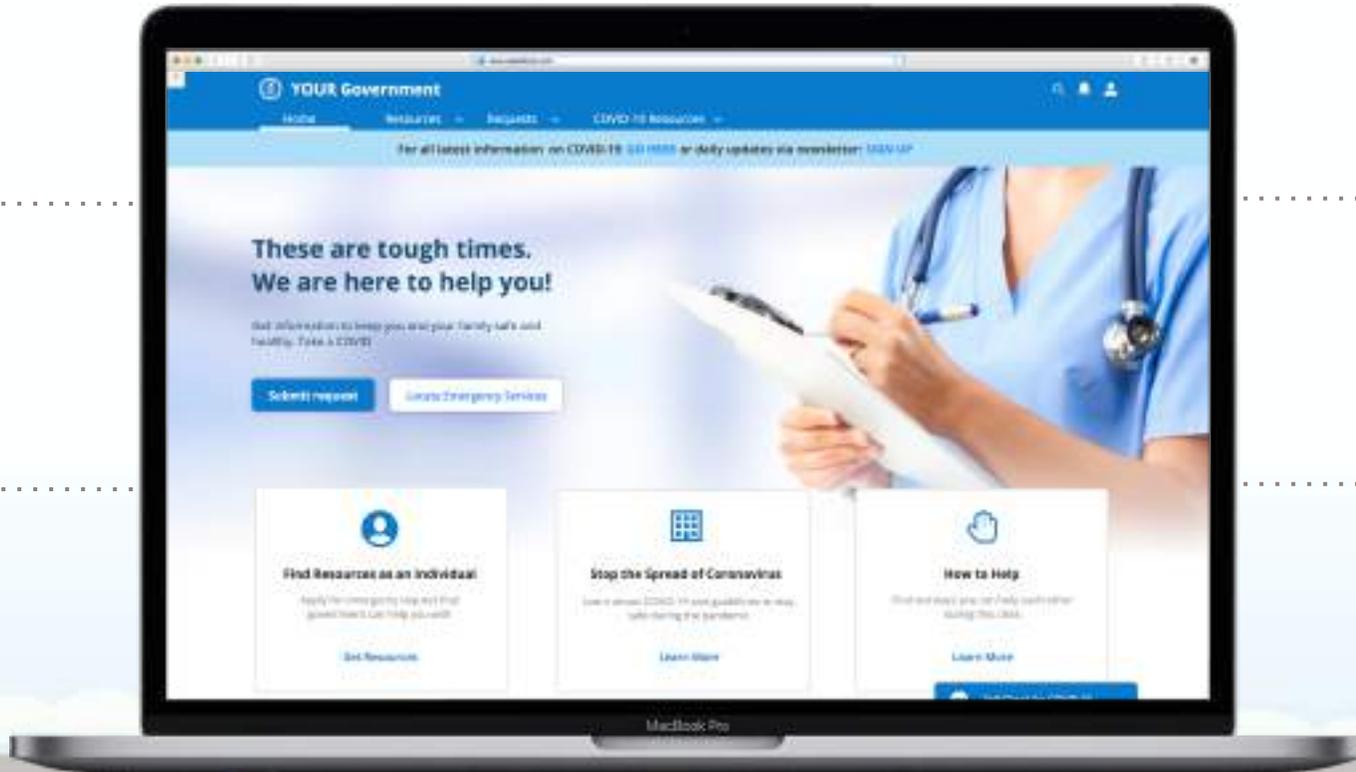


Community Cloud Plus for Public Sector & Community Cloud Plus for Health Cloud

Available Today

Secure member login & account access

Locate emergency services



Share trusted updates & resources

Digital-first, guided intake processes



Maxicare

How Maxicare is rising to the challenge...

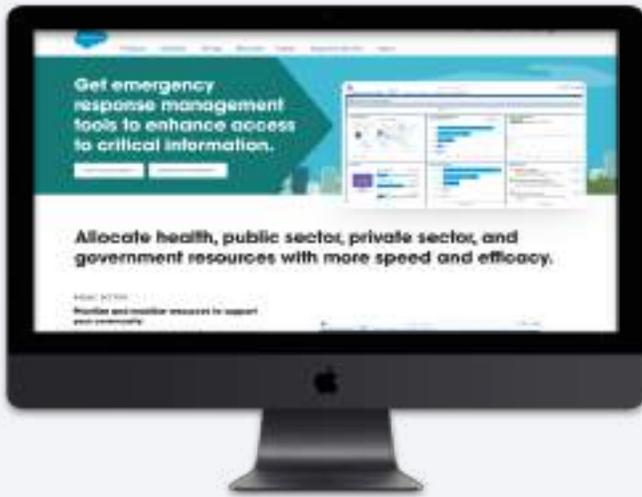
“We’re lucky enough to finish transitioning to salesforce right before the pandemic...We leverage Salesforce to orchestrate interactions & through Salesforce knowledge management we developed a content, published them and rapidly deploy it to our team...”

<https://salesforce.vidyard.com/watch/ZPH3WGVmH14nUWA2XhC3AT>

Sylvia Stolk | Chief Digital and Transformation Officer

Learn More About Emergency Response Management

Solutions for Public Health & Public Sector



[Visit ERM Website](#)



[Watch the Demo](#)



[Download the Data Sheet](#)



Thank You

salesforce



Connectivity

Touch Point

Solution

Fixed
Connectivity



Wireless Touch
Point



ICT & Cloud
Solution





 **PLDT**  **Smart**

CONNECTIVITY & TOUCH POINT
(Fixed & Wireless)

ePLDT

MOBILE APP
(ICT Cloud Solution)

HEALTHCARE

**FOR
ALL**

 **PLDT**  **Smart** **ePLDT**

Country-wide coverage

(FOR ALL) PEOPLE
PLACES



SENIOR FAMILIES



YOUTH PWDs

(FOR ALL) Market Segment

Fixed
Connectivity



Wireless Touch
Point



ICT & Cloud
Solution





e HEALTH

Powered by (Partners)

**The country's strongest
service enabler of
healthcare professionals**



e HEALTH

Online Consultation
Advance Booking
Calendar visibility
Online Payment



Digital Prescription
Lab Referral
SMS/Email Notification
Collaborations



e HEALTH

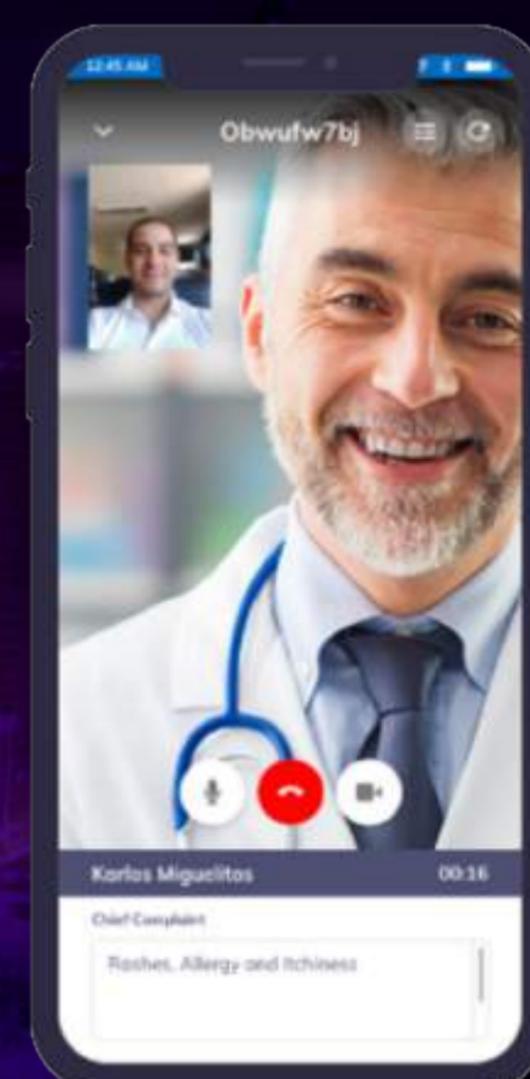
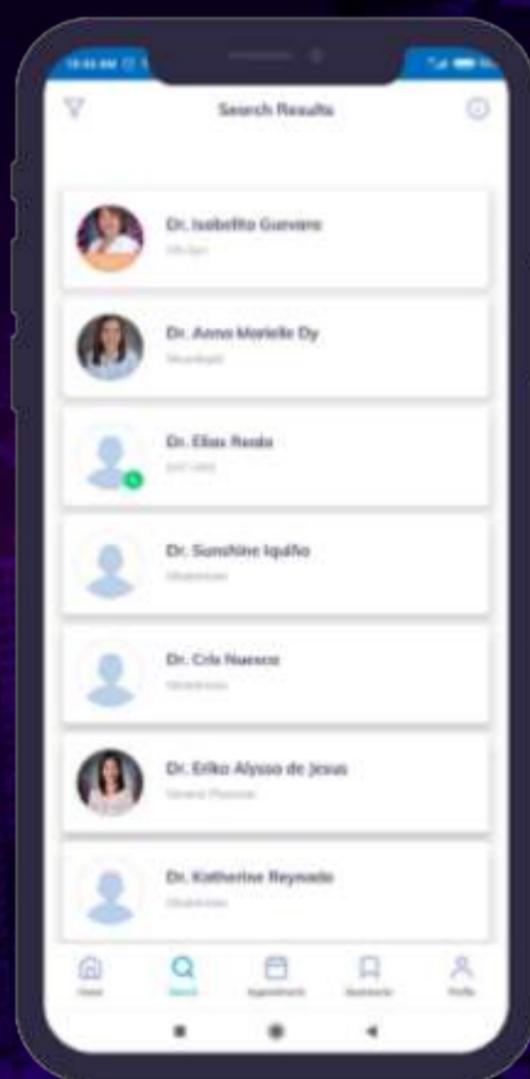
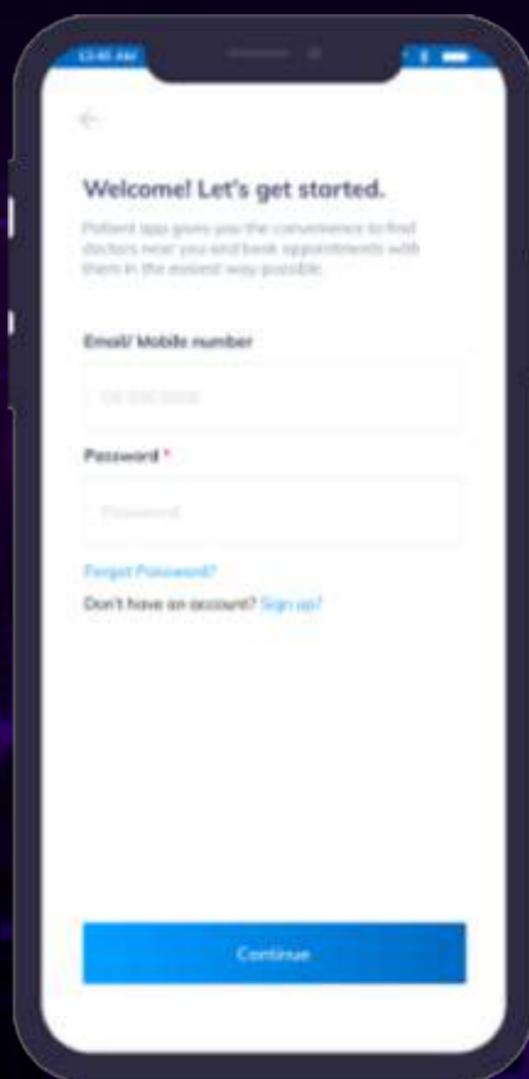
- Always-On 24/7 service
- Cross beyond the limits of physical office
- Alleviate hospital crowding
- Increase transaction frequency
- Increase health protection
- Increase risk mitigation
- Capture steady influx of patient and clients



PATIENT VIEW

Open & Select Expert

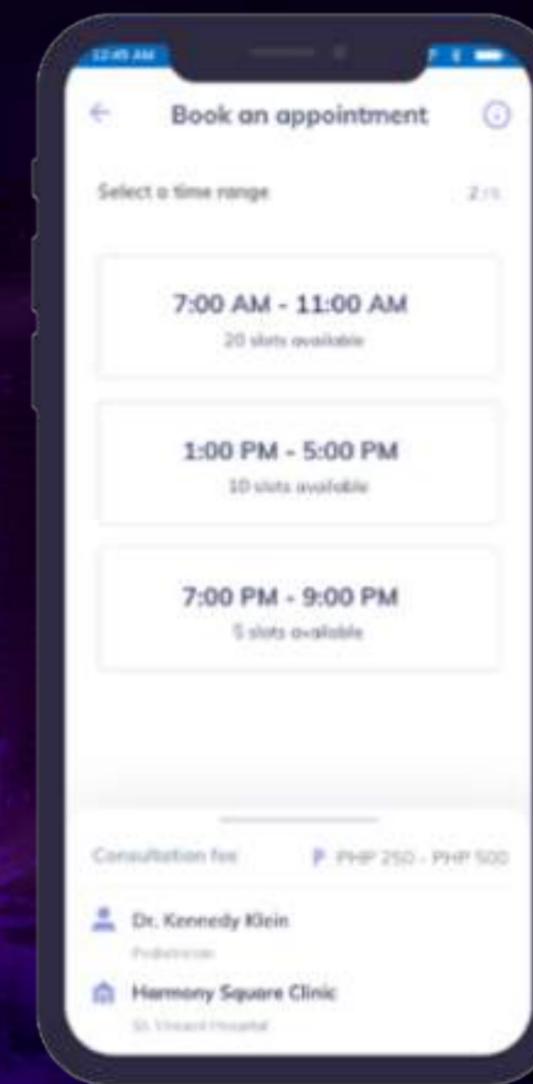
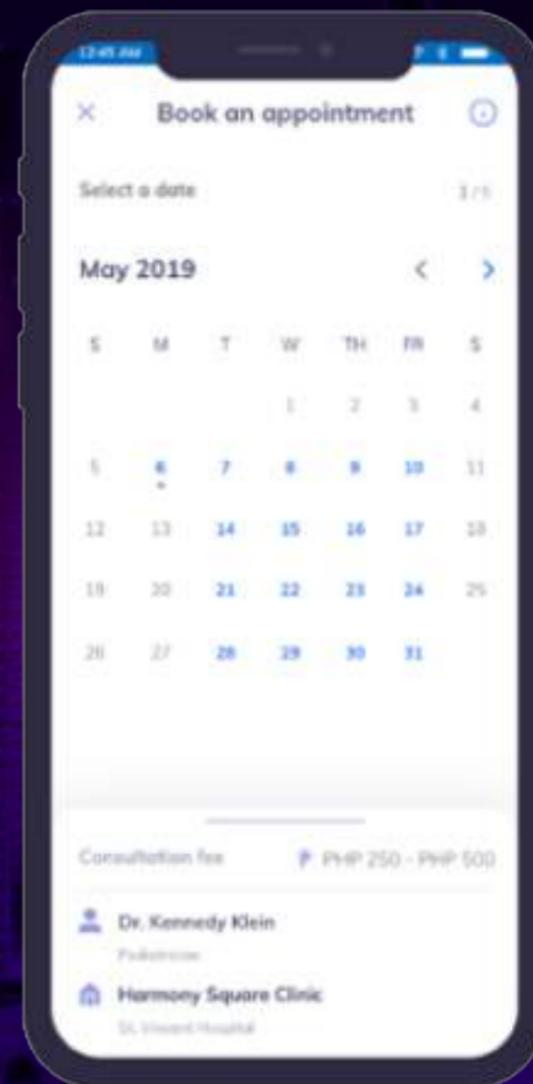
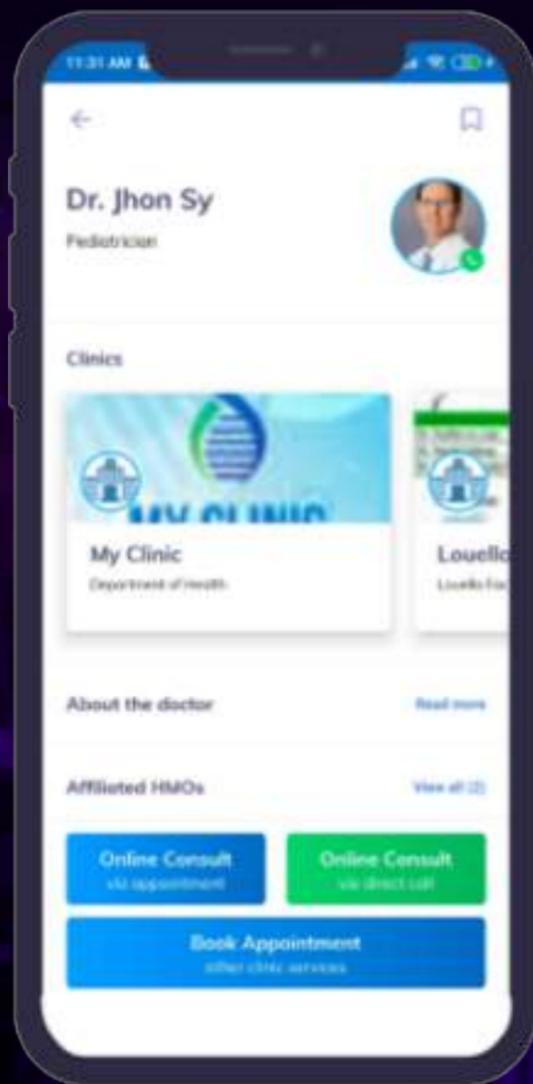
Wait for the Doctor



PATIENT VIEW

Select Book Appointment

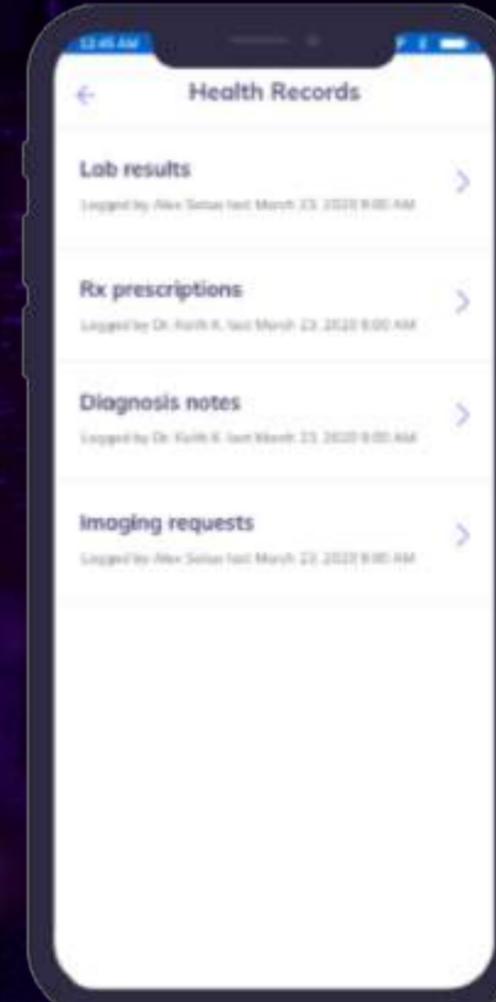
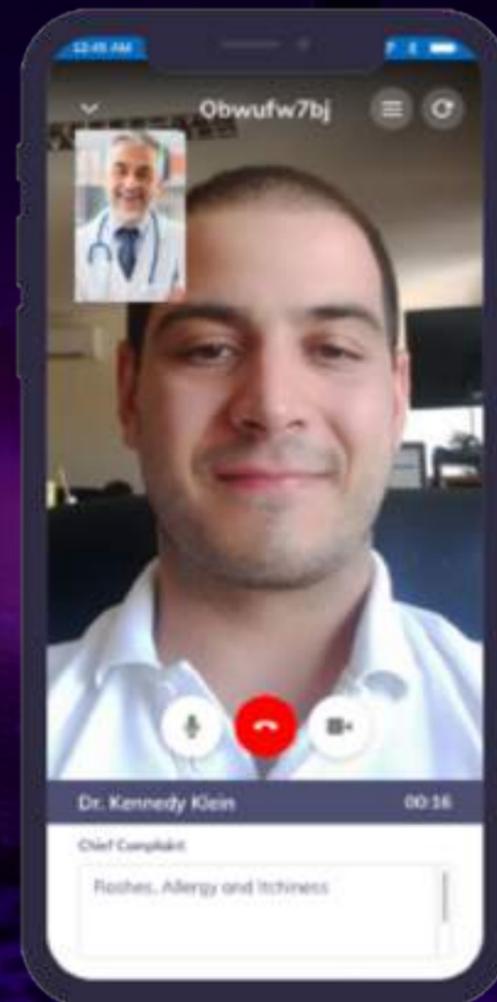
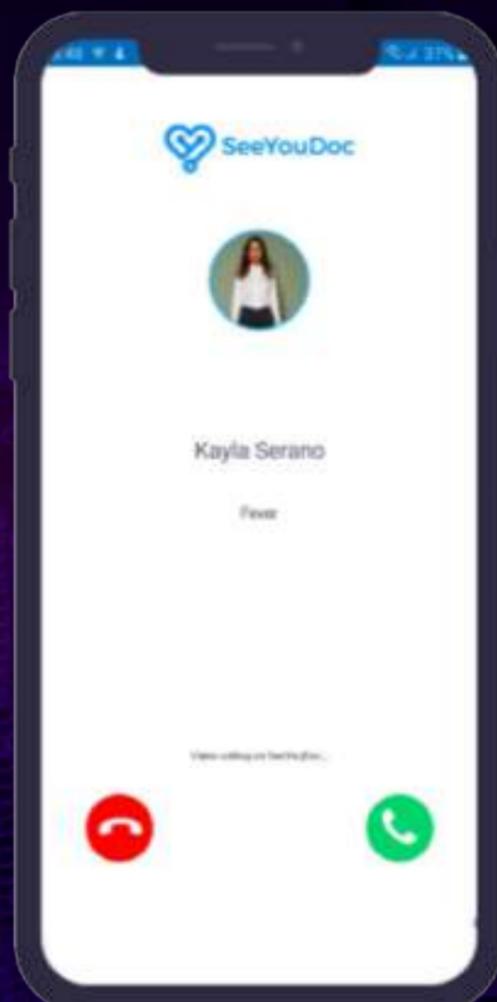
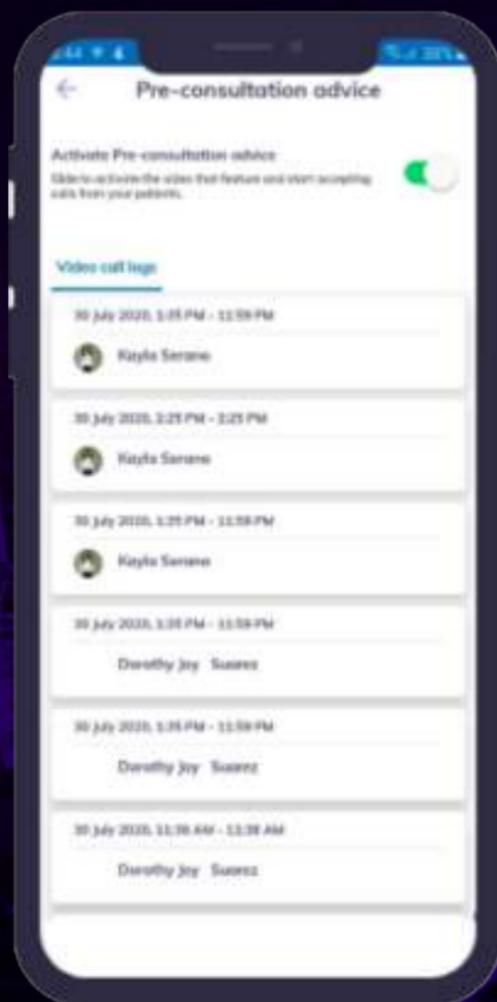
Select office and see calendar



PRACTITIONER'S VIEW

Activate Online Consult

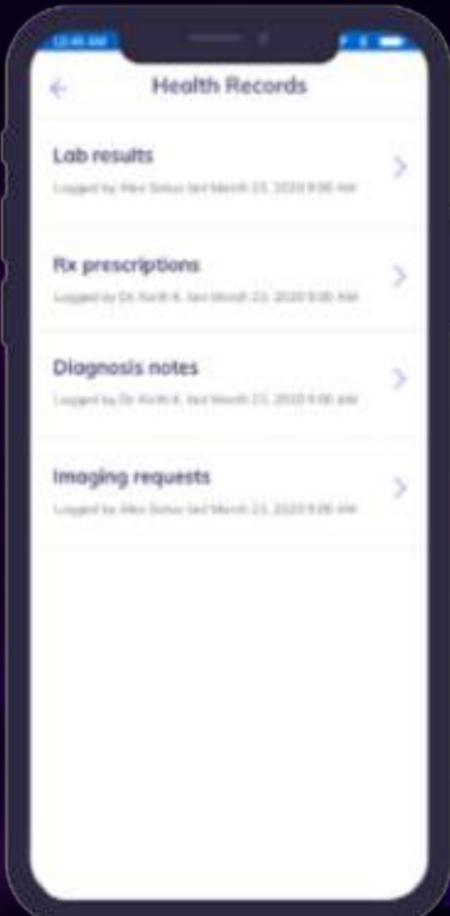
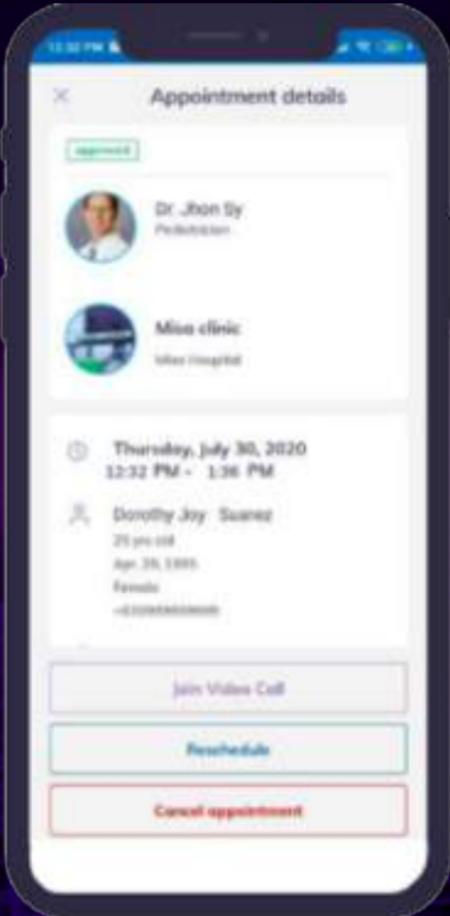
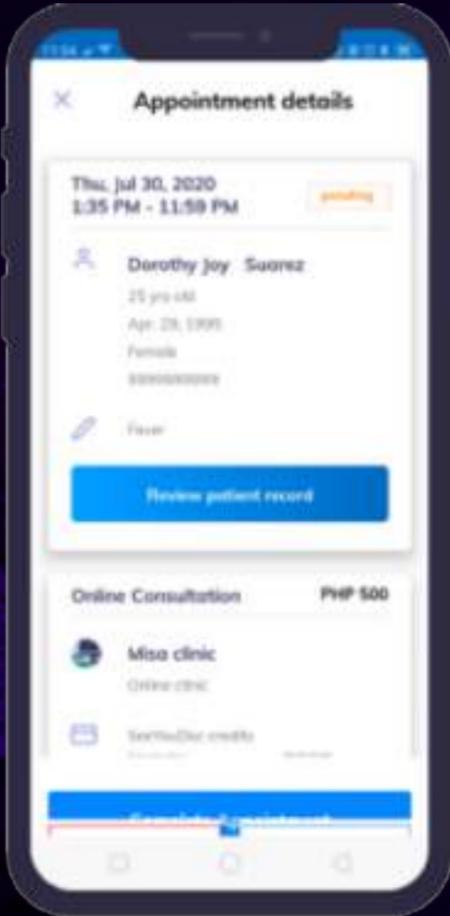
Check Patient Records

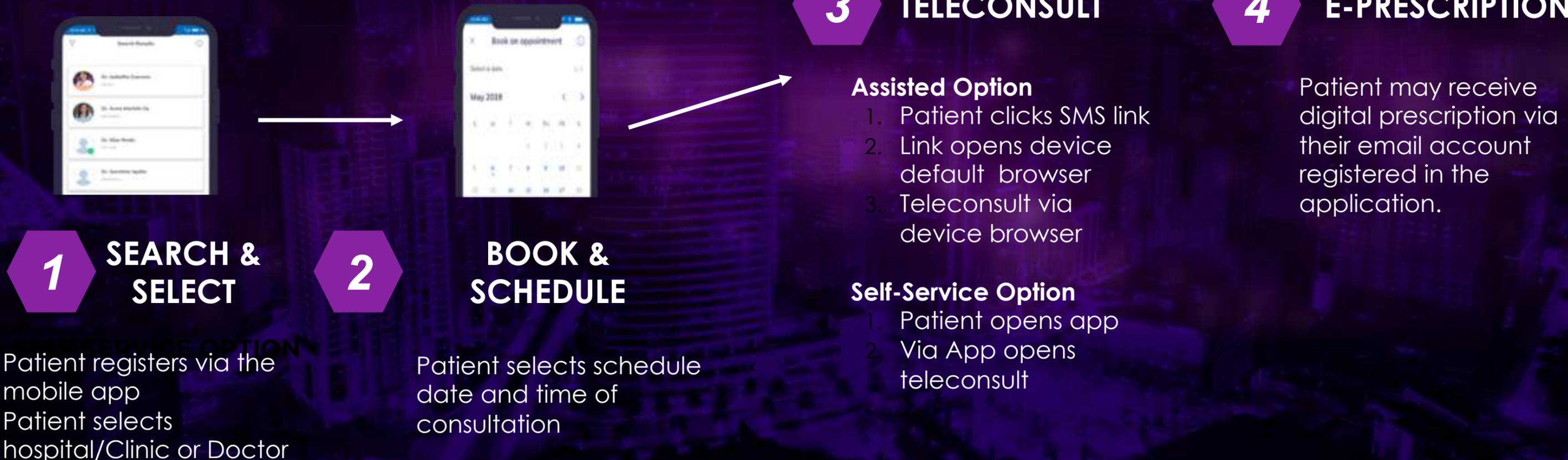
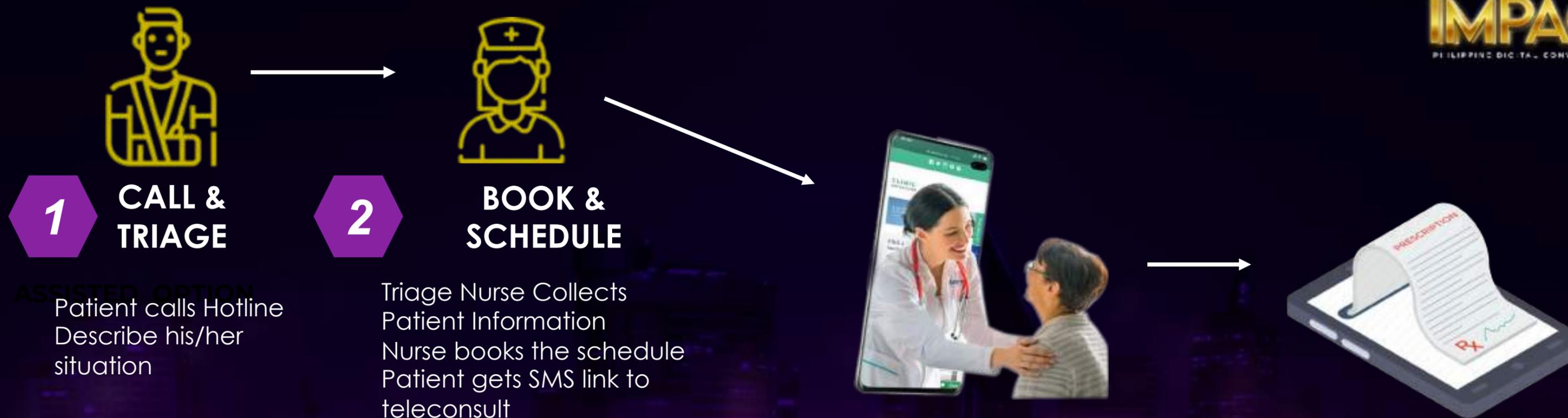


PRACTITIONER'S VIEW

Approve Appointment

See the patient







5 Drug Stores

With selected drug store partners in Metro Manila, Patients may collect the prescribed medication faster and safer.

- Visit Drug store and show Digital copy of prescription
- Send Prescription to select drug store and pick-up later

6 E-Laboratory

Doctors using eHealth Telemedicine may provide electronic referral so patients will no longer need to go to hospital to get endorsement.

1. Referral to Diagnostic Centers
2. Referral to Laboratories
3. Referral to partner clinics
4. Referral to partner hospitals

With the use E-referral patient may book an appointment in advance to the chosen lab or diagnostic center

7 Remote Patient Monitoring

- Automatic Blood Sugar Tracking
- Medication Logging
- Activity Tracking
- Estimate HBA1C at a glance
- Insulin Calculations
- Blood Glucose Levels
- Meal and Diet tracking
- Integration via Bluetooth



e HEALTH

Powered by (Partners)

PATIENT APP

DOCTOR'S APP

HOSPITAL APP

CLINIC APP

TEST CTR APP



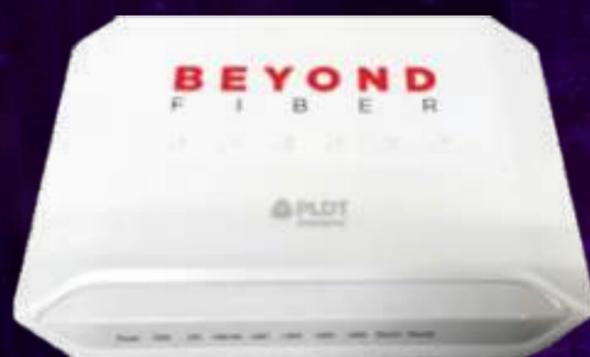
e HEALTH

Powered by (Partners)





Enterprise WiFi & Business Router



BEYOND
F I B E R

Business Grade Fiber



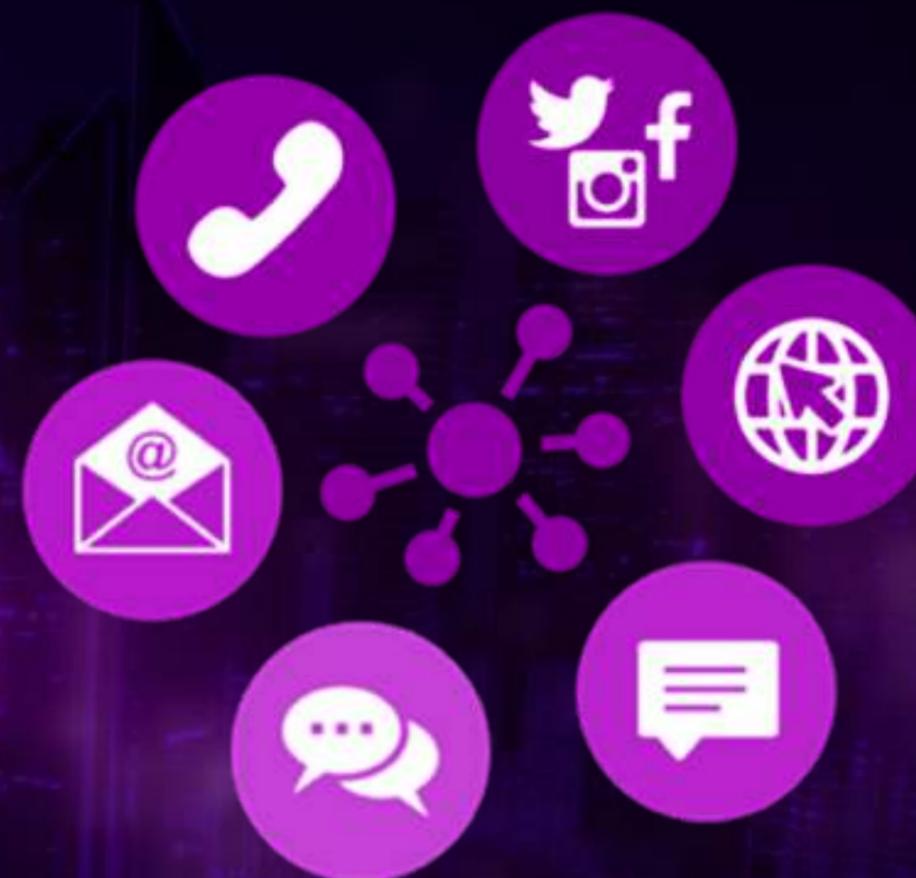
50Mbps*

**minimum of 90% of the bandwidth at 90% reliability at the fiber modem level*



CONTACT CENTER as a SERVICE (CCaaS)

**Voice, Email, Chat
SMS, Web, Social Media**





PREDICT • PREVENT • DETECT • RESPOND



ePLDT Security Operations Center



Nurse

PLAN 800

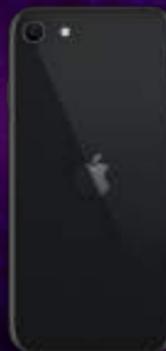


4GB DATA
Unli Call/SMS
FREE
Samsung A10S



**Doctor or
Specialist**

PLAN 1,500



10GB DATA
Unli Call/SMS
FREE
iPhone SE 64G



**Clinic or
Health Center**

PLAN 1,899



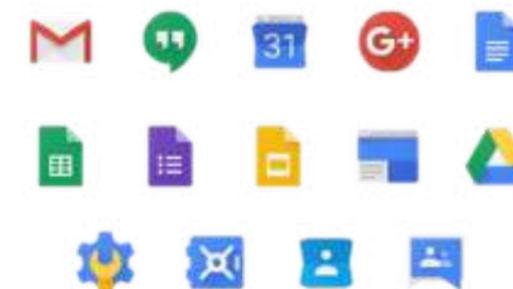
Industry-Grade
Router
Up to 25
connections

12 Month Lock-In

Notes: Anti Bill Shock (ABS)- built-in plan feature that automatically protects the subscriber's bill with a monthly coverage for regular data charges (Php 0.05/kb) worth P1500 on top of the plan MSF. Subscribers may enjoy a maximum allowable data allocation of 60GB after ABS, subject to Terms & Conditions.

Communicate | **ePLDT** | Organize | Engage

G Suite



ePLDT



ePLDT

SMS/Email Notification

Calendar Visibility

Lab Referral

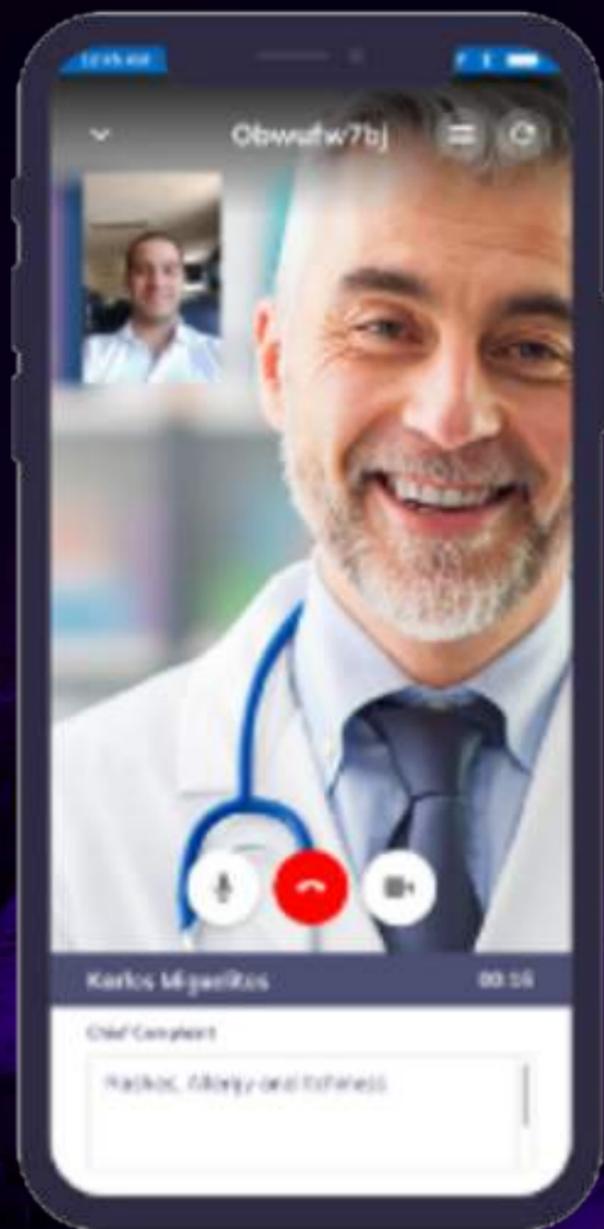
Online Consultation

Online Scheduling

Digital Prescription



HAPPY
PATIENT
PERSONALIZED
SERVICE
SIMPLIFIED
COMPLEX



e HEALTH

Powered by (Partners)



NOKIA

Enhancing Health Services with Broadband

DigiCon 2020

Ravi Kailat

Engagement Head, Nokia Enterprise Services



Effective Communication in Emergency Medical Services (EMS)

The impact of Broadband Services in Health Care

250k – 400k deaths happen in the US every year owing to medical errors, communication delays, and inadequate information flow. Miscommunication between caregivers during treatment of time-sensitive emergencies results from communication errors occur and lead to delays and other negative outcomes.



The issue:

- Private Mobile Radio (PMR) as well in many cases lack of communications outside of the main facilities



The need:

- Highest level of reliable mobile communications to support mission-critical applications
- Broadband data services that deliver real-time imagery, video, geo-location
- Always-ON connectivity to private cloud-based applications and databases
- Interoperability between different PS agencies



The solution:

- LTE/5G is today's most advanced and flexible wireless technology (spectral efficiency, native IP, QoS, range of frequency, Interoperability)
- LTE has a large installed base providing global economy of scale and thereby lower cost with wide range of devices which will continue in 5G



“LTE was the selected technology for mission critical mobile broadband communications and public safety became the key theme of 3GPP Release 13”

It's all about saving lives

Importance of Mobile Broadband in EMS

The needs of EMS/ first responders and how MBB* can create a difference



Save time

- Calculate fastest route, access traffic information, target nearest hospital
- Upload critical & background information on targeted site and deployed teams on site



Improve safety

- Safer operations using connected drones with on-boarded sensors (incl video/thermal cams)
- Casualty health monitoring/transfer of bio vitals to remote medical staff



Maximize efficiency

- Real-time collaboration between paramedics and remote doctor's office/hospital via VR/AR
- No loss of information/time during multimodal transport handoffs

The MBB Impact

- Fast loading of itinerary & data transmission all along the way (ubiquitous coverage)
- Ability to fly a drone to better locate the victim with real-time HD video feedback

- LTE/5G piloted drones for always-on mobile broadband connectivity (incl. first aid delivery)
- Support for IoT/security and confidentiality of data transfer

- Very high data throughput and URL Latency for immersive collaborative use cases using connected goggles/masks
- Real-time secure storage of/access to patient bio data in the cloud

*MBB=Mobile Broadband

Nokia Automated Analytics Solution to drive accurate, automated screening for COVID-19 and more

Companies and institutions require

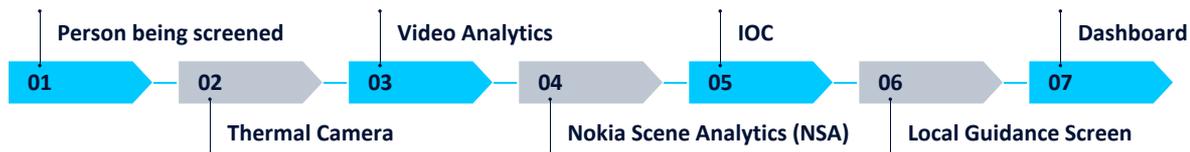
Fast zero-touch screening across all entrances

Ease of deployment and operation

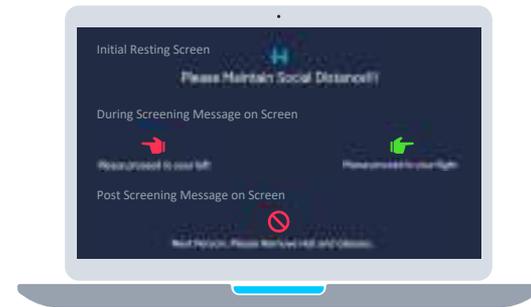
Flexibility to adapt for future needs

A solution approach (not just technologies)

The Operational Flow



Screened Individual User Interface



Nokia's approach

Unmatched end-to-end capability

Connect to existing infrastructure or create a private wireless network

Unmatched expertise

Automation and analytics to deliver accurate real-time results

Trust and global reach

Nokia is well known to deliver quality products globally

Flexible range of solutions

- Turnkey: Very easy to deploy
- Bespoke: For specific environments

Open architecture

- Bring Your own Algorithm (BYOA)
- Camera-vendor agnostic

Laser focused on automation to fight against COVID-19

Focused R&D and investment

Nokia Automated Analytics Solution for Access Control

Secure, reliable and predictable performance

Reach



Deploy wherever you need it

- Anywhere in the world
- Any site, any device
- On-premises or parking lot

Flexibility



Use and operate it as you see fit

- Fit for purpose modular or turnkey
- Solution designed to scale and offer customer several use cases beyond temperature and mask detection
- On-premises or cloud-based operations

Ease of use



Industries' business is not networking but depends on it

- Plug-and-Play
- Web management portal
- Managed operation

Connected Ambulance - When every second counts

Smarter networks for faster emergency response

Optimized route to ambulance for faster patient transfers

1. Live Medical Consultation

- Realtime bio vital data sharing with remote doctor and hospital
- + Gets real-time guidance while on the way to hospital

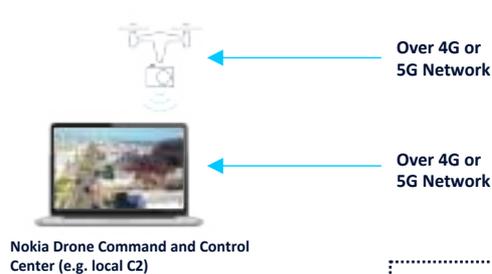
2. Instructions sent to Hospital

- VR goggles for live immersive video & voice communication with the ambulance
- Bio-vital signs and body cam augmented reality
- Connection to healthcare system/hospital

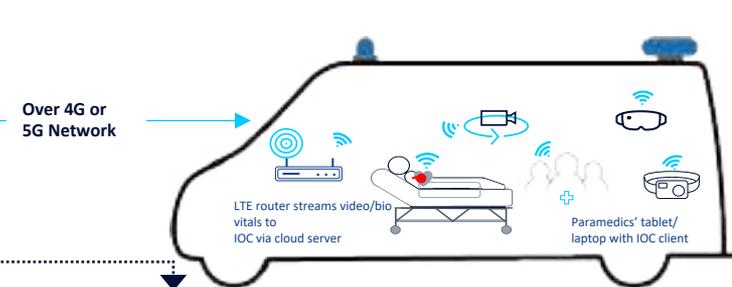
3. Real time sharing of Patient Health Status

- 360° camera
- Bio-vital signs monitoring + medical radiology
- Body cam
- Connection to healthcare system

Sharing/recording video feeds from a drone



Sharing/recording data feeds from a connected ambulance

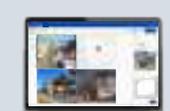


Nokia Drone Command and Control Center operates the drone(s)

Command and Control Center can be located on site or centrally



First responders UEs with IOC client



First responders UEs with IOC client



Remote doctor/hospital with IOC client

Cloud server can be Edge cloud server (tactical case) or Regional cloud server

Real-time content display on devices attached to LTE/5G service (as shared by C2)

Summary

Broadband is driving EMS technology advancements

MBB will support Operations & Patient Care with means of:



SMARTER

Detection of Medical
Emergencies



QUICKER

Activation and Response
of the EMS System



BETTER

Patient Care & Transport and
Scene & Data Management



NOKIA