ehCOS
We ´re here to help
by NTT DATA

ehCOS Remote Health

Virtual attention, patient monitoring and population management on a single platform.

©Copyright 2021 NTT DATA Spain and Affiliates.

NTT DATA Health

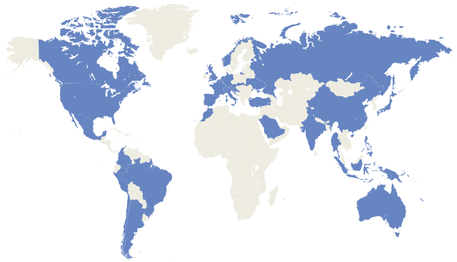
A benchmark in Health with a global presence.

+20
years helping Healthcare organizations

+200
healthcare organizations we work with.

+1000
specialized professionals in our team.

NTT Group



We are part of NTT Group, with a global presence in more than 50 countries and with more than 130,000 professionals

© Copyright 2022 NTT DATA Spain and Afiliates

Towards new health systems that are more proactive, more innovative and smarter

The **transformation of Health** in search of maximum speed, quality, and safety.

- Change of organizational model
- Accessible, responsive, and integrated care
- New models of care
- Demand management and prioritization
- Clinical and operational efficiency
- Biotechnology and personalized medicine
- Longitudinal approach to care
- Knowledge management
- Transparency and evaluation of results
- Clinical decision and patient integration

© Copyright 2022 NTT DATA Spain and Afiliates

The great challenges of health systems

We must evolve towards a smarter, patient-centred system

Clinic

Analytical solutions for the clinical phases of Prevention - Diagnosis - Treatment - Recovery - Control and Monitoring

Epidemiological

Analytical solutions for prediction, management and epidemic monitoring

Genomics

Analytical solutions in the field of genomics for the development of appropriate personalized treatments before the disease develops

Management

Analytical solutions capable of supporting operational improvement, financial management, resource planning and improvement of clinical and operational processes

Pharmacovigilance

Analytical solutions to improve the efficacy and safety of medicines

Clinical Research

Provide the organization with a global platform of data from multiple sources at the service of clinical research.

© Copyright 2022 NTT DATA Spain and Afiliates

Our digital healthcare transformation

NTT DATA Health framework

Digital excellence

Digital models of relationship with citizens based on the centrality of patient citizenship and community health, oriented to prevention and anticipation that guarantees care and continuum of care.

Digital talent

Health professionals have new needs and expectations in the face of the challenges posed by a much more empowered digital society.

Clinical improvement

Apply advanced technologies throughout the value chain of health care to improve clinical management (disease prevention, health promotion, diagnosis, treatment, and monitoring).

Operational excellence

Digitalization and automation of management and healthcare processes, from the perspective of developing state of the art clinical management systems and from the automation and operational efficiency of management processes.

Data Driven Health

Data driven health to align short and long term decision making based on evidence from data.

© Copyright 2022 NTT DATA Spain and Afiliates

We are here to help patients, healthcare professionals and to help you.

NTT DATA believes that the most important thing in healthcare is people: the health professionals who provide medical care and, of course, the patients who receive it.

That's why we developed ehCOS, a suite of digital healthcare solutions developed in conjunction with healthcare professionals to increase efficiency and encourage best practices in clinical and organizational processes.

© Copyright 2022 NTT DATA Spain and Afiliates

The health solution designed to help the health system

Designed by professionals, developed by NTT DATA, tested by everyone

ehCOS is a modern suite of products to deliver digital healthcare at scale and securely and cost-effectively. An open and flexible solution with a modular design that allows the progressive adoption of ehCOS, adapting to the needs and availability of each center, and is fully interoperable to ensure easy integration with other standards-based applications.

Scalable and Secure Digital Health Solution

ehCOS is a modern suite of products to deliver digital healthcare at scale, safely and cost-effectively.

Designed by and for healthcare professionals

It has been developed in collaboration with healthcare professionals to drive efficiency and encourage best practices in clinical and organizational processes.

Modular design adaptable to the needs

Its modular design allows to adopt ehCOS progressively, adapting to the needs and availability of each center.

Open, flexible and easily integrated solution

It is an open, flexible, standards-based solution, and is fully interoperable to ensure easy integration with other standards-based applications.

NTT DATA

ehCOS Triage

An efficient and homogeneous way to manage clinical risk

ehCOS Emergency

Medical record entry

ehCOS Critical Care

Helps healthcare professionals make accurate decisions and save lives

ehCOS EMPI

In dealing with patients there is no room for error

ehCOS CLINIC

(HIS + EMR)
maximize value to improve health outcomes

ehCOS PRM

Transform people's relationship with their health through results

ehCOS Clinical Share

Sharing patient information continuously and securely

ehCOS CMK

Improve clinical practice and encourage scientific knowledge through data

ehCOS Remote Health

Connect the patient anywhere and anytime

eva
Entreprise controversial AI by NTT DATA

Datalaia
The data & AI platform for public sector by NTT DATA

A solution that grows more and more every year

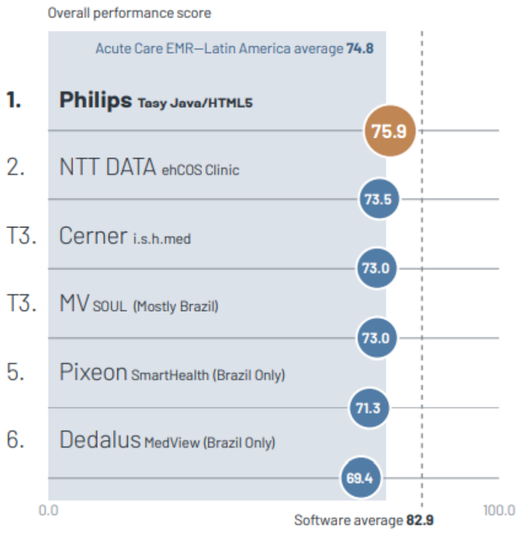
Acute Care EMR Latin America

GLOBAL SOFTWARE RANKINGS | ACUTE CARE EMR

Acute Care EMR Latin America

Segment definitions can be found on page 28.

Solution Comparison



Grading scale (Grading methodology can be found on page ii)

A+ = 95.0+	B+ = 85.0–87.9	C+ = 75.0–77.9	D+ = 65.0–67.9	F = <58.0
A = 91.0–94.9	B = 81.0–84.9	C = 71.0–74.9	D = 61.0–64.9	
A- = 88.0–90.9	B- = 78.0–80.9	C- = 68.0–70.9	D- = 58.0–60.9	

Trend	Total evaluations	Culture	Loyalty	Operations	Product	Relationship	Value
-1%	n=18	D+	B-	C+	B	C	C
+8%	n=9	D+	C	C	B	C+	C-
-4%	n=10	D	B-	C	C+	C+	D
-9%	n=22	D-	B	B-	B-	D+	D
-4%	n=12	D-	B-	C	C	B-	D-
0%	n=10	C-	C-	B-	D+	B-	F

KLAS

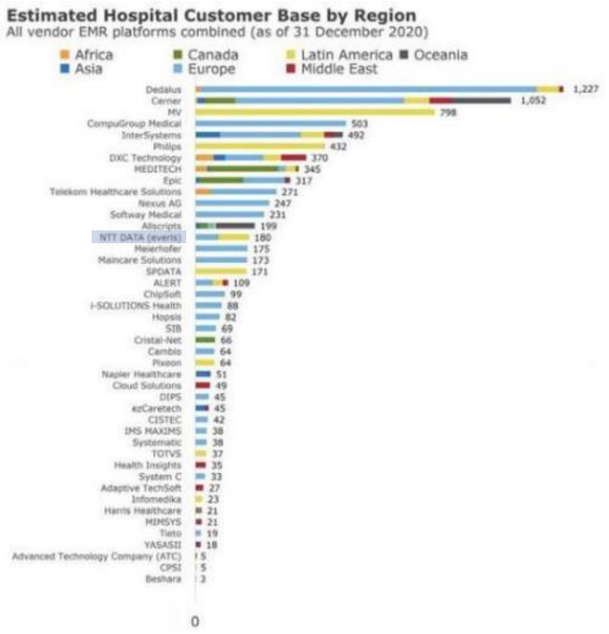
- ehCOS Clinic is positioned in the TOP 2 in the best of KLAS Global Software 2022 for the "Acute Care EMR Latin America". Last year ranked 4th, winning 2 positions.
- In 2022 ehCOS Clinic increased its scores by 8% compared to last year, going from 68.3% in 2021 to 73.5% in 2022 in overall performance.
- Product and Value categories improved their indices in 2022. Product scored a "C" in 2021, now a "B". Value went from a "D-" last year and now is getting a "C-"

A solution that grows more and more every year

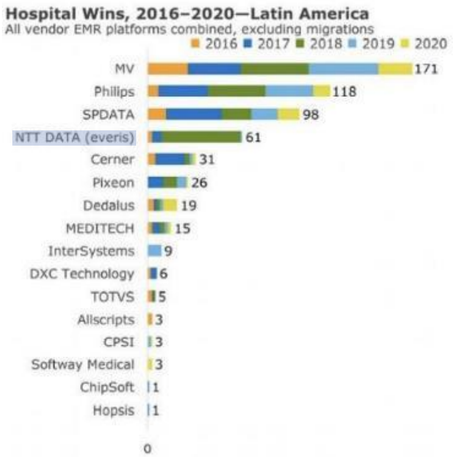
ehCOS
We´re here to help
by NTT DATA

Ranking NTT DATA Health

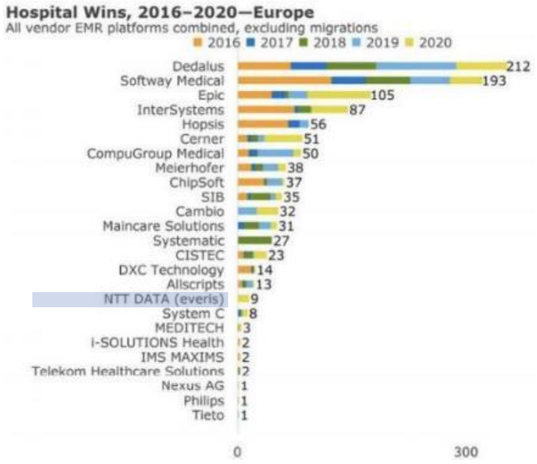
NTT DATA ranks 14th globally (outside the U.S.) with the largest customer base



In Latin America, NTT DATA maintains the TOP 4 at Wins Hospital



The 9 hospitals achieved in Portugal place NTT DATA in the European TOP 18



KLAS
ACCURATE · HONEST · IMPARTIAL

KLAS

“In the last 5 years, NTT DATA has been the largest seller of EMR solutions in Spanish-speaking Latin American countries, increasing its customer base by 90% since 2015, thanks to the ehCOS Clinic solution”

NelsonHall

NELSONHALL

“NTT DATA Named a Leader in Healthcare Operational Analytics Services by NelsonHall”

Everest Group
PEAK MATRIX LEADER

PEAK MATRIX

“NTT DATA recognized as a leader in the evaluation of the PEAK matrix of digital services for healthcare providers by the Everest Group”

A health solution with global presence and assistance

Everyday healthcare professionals and patients use ehCOS solutions

ehCOS
We´re here to help
by NTT DATA

The NTT DATA Health Ecosystem

Customized, integrated and fully connected solutions

syntphony Health

ehCOS
We´re here to help
by NTT DATA

Innovative and personalized solutions for the Health sector with technologies such as Artificial Intelligence and Big Data to develop better processes and new models that help research and transformation of the sector in the near future.

Soluciones tecnológicas:

- Clonika
- Dolffia
- eva
  Enterprise conversational AI
  by NTT DATA
- Datalaia
  The data & AI platform for public sector
  by NTT DATA

Omnichannel Health Experience Between Patient, Center and Physician.

- The day of health: well-being and prevention.
- All at a click: digital front door.
- The hybrid experience.

Tools for the digitalization of the Health System.

- Integral remote care.
- Population health and patient segmentation.
- Ongoing care of chronic diseases.

Automation to make operations more efficient.

- Optimization of reimbursement operations.

Improvement of clinical aspects. Liquid and connected health.

- Connected Health Ecosystem.
- To the liquid hospital.

© Copyright 2022 NTT DATA Spain and Afiliates

ehCOS Remote Health

ehCOS by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

DIGITAL TECHNOLOGIES ARE KEY TO THE FUTURE OF HEALTHCARE

World Health Organization.
Global strategy on digital health 2020-2025

> ... the internet of things, virtual care, remote monitoring, artificial intelligence, macrodata analysis, intelligent devices, platforms for remote data capture and exchanging data and information within the healthcare ecosystem, can all improve medical results and continuity of care.

©Copyright 2021 NTT DATA Spain and Affiliates.

BOOSTING CONNECTED AND CONTINUOUS HEALTHCARE MODELS FOR GREATER SUSTAINABILITY

The COVID-19 pandemic has laid bare the fragmentation of care and treatments, and the need for resilient and proactive healthcare systems that focus on individuals and their involvement in caring for their health, even from their own homes.

An integrated, coordinated model of continued treatment that is geared towards chronicity and disease prevention will be essential in the road towards optimizing healthcare services.

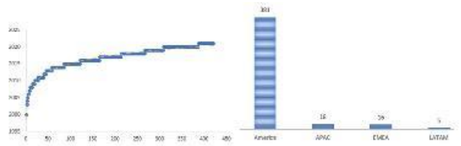
©Copyright 2021 NTT DATA Spain and Affiliates.

TO ACCELERATE TRANSFORMATION AND IMPROVE THE PATIENT'S EXPERIENCE

The transformative trends in the sector are already moving towards digital healthcare and the future scenario of telemedicine and remote monitoring of patients. The needs imposed by the COVID-19 healthcare crisis have sped up the disruption of telehealth services with new hybrid models of care, thus reducing existing barriers.

TRENDS HIMSS 2021. Digital Healthcare

Telehealth.



Transactions - Investment funds. (Crunchbase)

Monitoring.

From **$417** MM to **$941** MM in 2020

US Funds. (Rock Health)

Tests, follow-up.

Platforms for **community health management.**

©Copyright 2021 NTT DATA Spain and Affiliates.

BECAUSE HEALTH CARE HAS CHANGED FOREVER

©Copyright 2021 NTT DATA Spain and Affiliates.

A TELEHEALTH SOLUTION

©Copyright 2021 NTT DATA Spain and Affiliates.

ehCOS REMOTE HEALTH

A response to the requirements of virtual treatment and public health on a single platform

This is the **Telehealth** platform developed by NTT DATA, scalable, interoperable and centered on the patient and on public health, which links up with **hospital systems, Electronic Medical Records and remote devices to monitor** the patient, improving safety and the quality of healthcare.

ehCOS Remote Health adds analytical capacities to hospital and community health management, helping to manage patient relationships and to conduct **healthcare campaigns among the public**.

+78 thousand
Patients treated

+2,800
Professionals involved

+5M
Citizens

Potential population size

7
Countries

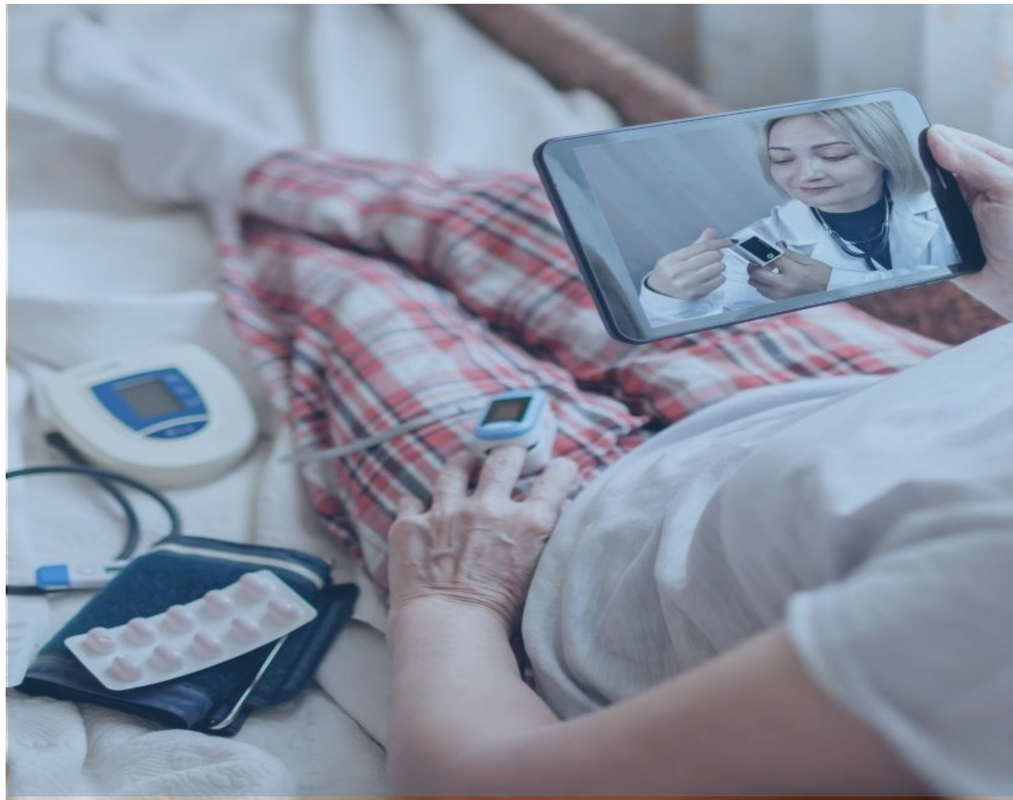
26 thousand

Patients treated
Vital signs recorded

18 thousand

Appointments scheduled
+ 100 thousand email interactions

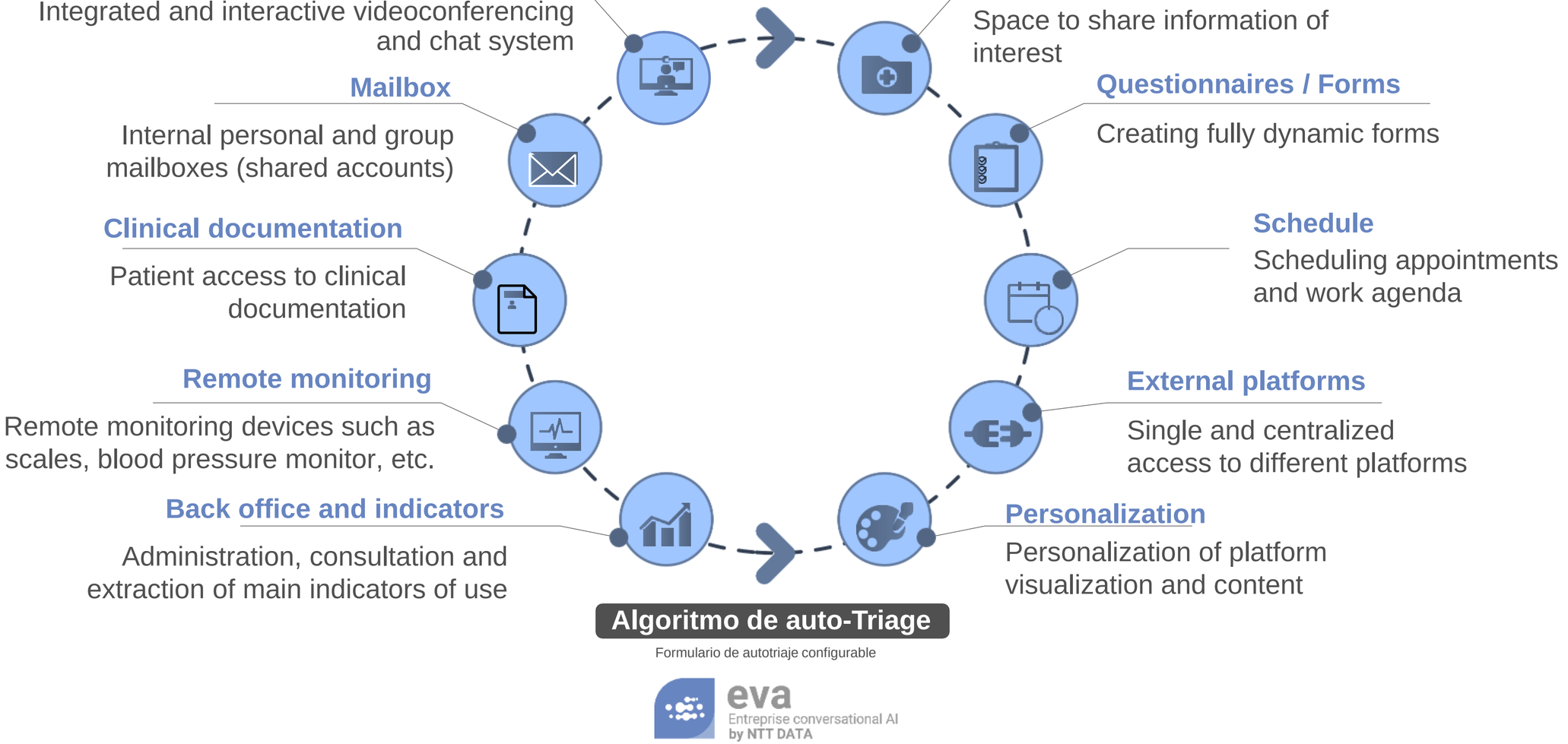
+135 thousand
Questionnaires answered
+ 40% success rate



©Copyright 2021 NTT DATA Spain and Affiliates.

ehCOS REMOTE HEALTH

Abilities



©Copyright 2021 NTT DATA Spain and Affiliates.

BENEFITS

An innovative means for new hybrid models of care

©Copyright 2021 NTT DATA Spain and Affiliates.

Caring and communicating

Implementing remote care processes, synchronous and asynchronous monitoring and virtual assistants

Preventing and educating

Performing proactive services for healthcare promotion, by means of personalized campaigns, plans and reminders

Managing public health and resilience

Facilitating epidemiological and population analysis to organize and optimize Healthcare resources

BENEFITS

High-quality healthcare services

Improved access to healthcare services

Swift access to care from any place, increasing opportunities for people.

Rapid diagnosis and optimization of clinical processes

Patient self-triage system for priority treatment, thanks to integrated virtual agents that redirect cases to the appropriate treatment process.

Improved patient experience and satisfaction

- Improves service provision and availability, patient comfort, and reduces waiting and travelling times.
- Improved doctor-patient communication and shared decision-making.

Quality and safety of care

All patient information readily available, integrated with hospital systems, medical records and remote monitoring data.

Improved continued treatment and coordination of care

Improves continuity of care and monitoring of chronic patients and prevention of episodes.

Patient commitment and prevention

The patient takes control of their health, actively participating in selfcare, learning and monitoring.

©Copyright 2021 NTT DATA Spain and Affiliates.

BENEFITS

Improved community management and resilience of healthcare services

More responsive public health management and prevention

- Creating patient segments for performing actions and to define each patient's pathway.
- Improved success rates in digital public health campaigns.

Improved responsiveness in clinical and public health management

- Workable population analysis and follow-up of indicators and metrics.
- Support for healthcare crisis management and epidemiological analyses.

Improved patient experience and satisfaction

- Decentralizing the demand for clinical attention, preventing the saturation of services.
- Reduced costs of physical visits, reduced rates of hospital readmission, reduced demand for emergency services and reduced hospital stays.
- Lower costs of implementation and maintenance of telehealth technology, available as SaaS service. Increased productivity.

©Copyright 2021 NTT DATA Spain and Affiliates.

SOLUTION

An innovative 360° relationship management model with patients based on digital profiles

Management without CRM

- Without relationship tools
- Limited context user support
- Manual contact actions
- General campaigns

Traditional CRM - Population profile

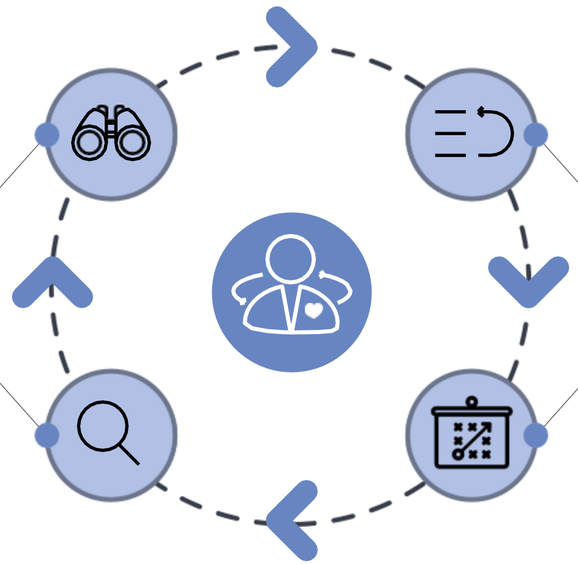
- Call center support tools
- Localized context user support
- Manual contact actions
- Campaigns based on segmentation

Innovative CRM - Digital profile

- Cross-cutting tool for organization
- Digital and 360° user support Automated contact actions
- Campaigns based on profiling

Corporate systems
Digital Profile
Inferences

DIGITAL PROFILING



PROACTIVE

Contact/ Engagement plans
Recommendation flows

AUTOMATION

Voice of customer surveys
Campaigns
Recommendations
Monitoring achievements

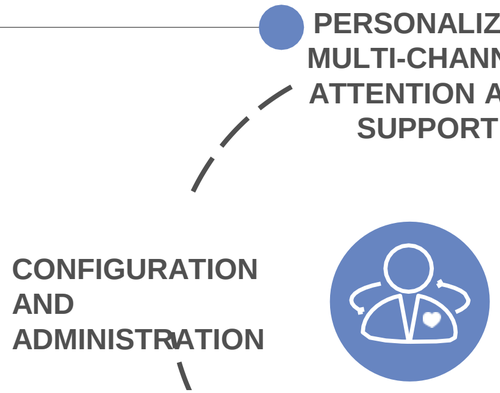
PERSONALIZATION

Recommendations
Analysis
Personalized views

©Copyright 2021 NTT DATA Spain and Affiliates.

SOLUTION

Managing patient and community relations proactively and reactively



To improve and personalize patient/public support

- Remote Health views Live chat
- Voice chatbot Case management 360 View of patient
- BD knowledge

Inferences on 360º profile and monitoring achievements

- Personalized recommendations Profiling
- Segmentation
- Management notifications
- Achievement control
- Reporting

Integration of information and activity in the 360º profile

- Contact repository
- Population profile
- Digital profile
- Clinical profile

Proactive and personalized digital interaction

- Campaigns
- Surveys
- Contact/engagement plans
- Population segmentation
- Impact measurement
- Event monitoring

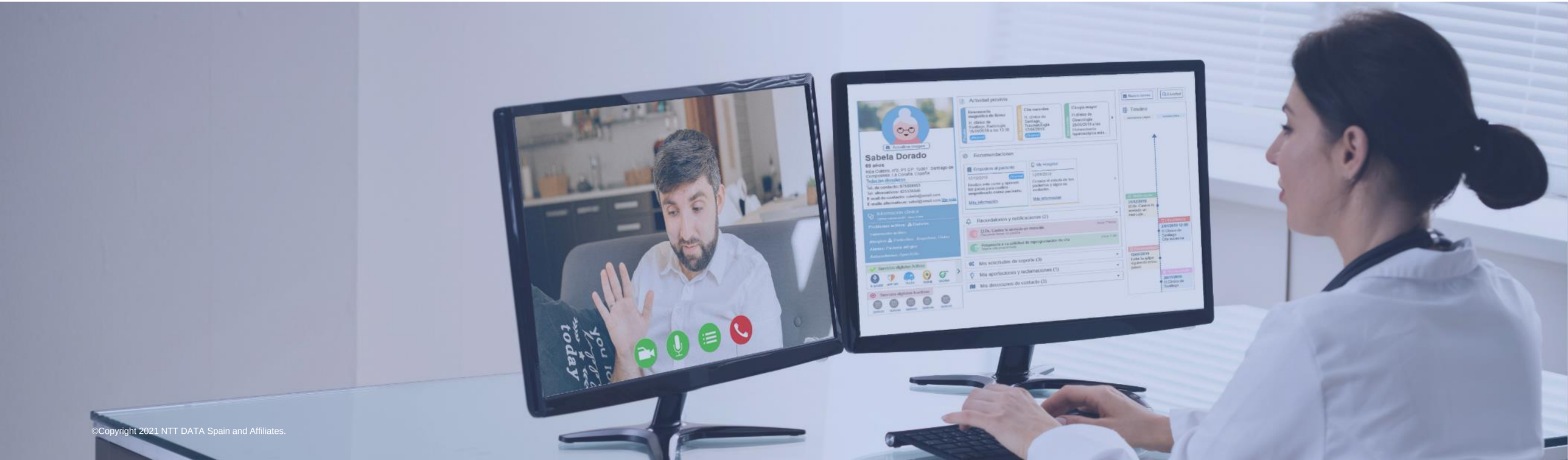
©Copyright 2021 NTT DATA Spain and Affiliates.

SOLUTION

A single point with a 360º view of the patient

All patient information grouped in one place for the attention, care and management of their treatment.

Multi-channel access to the system from the medical portal in case of professionals, patient portal or mobile applications available for each profile.



©Copyright 2021 NTT DATA Spain and Affiliates.

SOLUTION

ehCOSRemote Health app

The ehCOS Remote Health mobile APP, available for iOS and Android devices, expands the channels available to access the service and may be used by patients and professionals, with all guarantees of safety,
integrity and privacy of medical data.

©Copyright 2021 NTT DATA Spain and Affiliates.

©Copyright 2021 NTT DATA Spain and Affiliates.

SOLUTION

Telemedicine

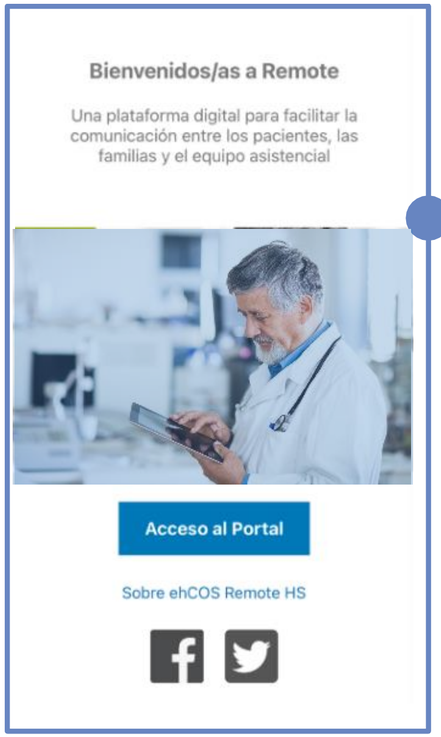
During an appointment, all that is required is to start a session on any device in order to have a new channel for healthcare attention and services.

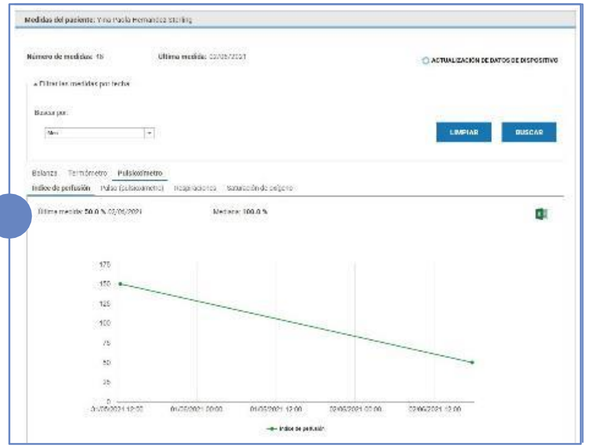
- Second opinions
- Monitoring of chronic patients
- Home Care processes
- Remote clinical committees
- Pluripathological patient care
- Group therapy

SOLUTION

Remote monitoring and follow-up

Integration of IoT devices and wearables that allow consistent patient data capture for monitoring their health. These data may also be recorded manually.





©Copyright 2021 NTT DATA Spain and Affiliates.

SOLUTION

Data-based agile decisions

Clinical evolution analysis

- Evolution of cases at the individual level and relative to severity groups.
- Stratification of patient profiles and medical records.
- Prediction of clinical evolution.
- Case-based analysis.

Activity analysis (centers, professionals)

- Indicators of activity (center, specialization, professionals, etc.).
- Characteristics of each center (number of ICU, healthcare circuits, etc.).
- Indicators of utilized resources.

Resilience analysis of the healthcare system

- Availability of professionals.
- Availability of medical resources.
- Predictive models of potential evolution scenarios.

Cluster analysis of epidemiology

- Evolution of identified cases (models for predicting evolution, graphs for correlating transmission vectors, etc.).
- Identifying the degree of individual and relative evolution according to related groups.

©Copyright 2021 NTT DATA Spain and Affiliates.

SUCCESS STORY

Preventing and containing Covid-19 with the help of ehCOS Remote Health

BACKGROUND

NTT DATA accompanies the government of Córdoba in Argentina in its mission for the digital transformation of the healthcare system, for a population of 3.5M inhabitants.

The COVID-19 health crisis has posed a challenge to the system's resilience and ability to respond rapidly and in a timely manner to the increased demand.

SOLUTION

The healthcare system of Córdoba has implemented ehCOS Remote Health to improve their patient care capacity and for the improved safety of professionals and patients alike.

- **TIMELY CARE AND COMMUNICATION**
  Use of self-triage tools, telecare and remote monitoring.
- **EDUCATION AND PREVENTION**
  With the launch of segmented information campaigns for the public
- **PUBLIC HEALTH AND SYSTEM RESILIENCE MANAGEMENT**
  With the analysis and reporting of metrics and indicators for real-time monitoring of the evolution of the pandemic.

22.000
Patients treated

270
Professionals

+3M
Citizens

Potential population size

+ 8,500
Questionnaires answered

+ 99% success rate

27.000
Medical reports generated

16.000
Appointments scheduled

©Copyright 2021 NTT DATA Spain and Affiliates.

EHCOS REMOTE HEATH.
COVID 19 - USE CASE

Diagnosis

Management of suspected and mild positive cases of COVID19

Professional

Directed diagnostic guidelines

A professional (via call center) will review symptoms and will send **diagnostic guidelines** to the patient.

Serious

Instruct the patient to go to the **emergency room** of a specific Hospital, to a **COVID19 fast test point** or mobilization of **emergency resources**.

Continuous care telemonitoring with the quarantined patient, remotely, to verify a good prognosis, **generate trust and prevent patients from traveling to the hospital**

Logistics support for managing daily life, to ensure the availability of basic resources (food, medicine, etc.)

Design of behavioral interventions and awareness raising campaigns. Sending of **automated information to citizens**, when cases are detected **in the community**, with the disease already rooted

1 — 2 — noCovid19 — End — 4 — 7

ehCOS Remote Health

Patient Relationship Management

Citizens

Self-triage

Logging of symptons and Other relevant information by citizens, to obtain automated recommendations.

Mild

3 **Isolation of patient** at home. Charts of suspected or confirmed positive cases (mild)

5 **Logging and continuous monitoring of clinical variables**, temperature and other factors (cough, diarrhea, etc.) by patient, at home

Post-Pandemic
scenario without social isolation measures

Managers and technicians (relevant authority)

Datalaia
The data & AI platform for public sector by NTT DATA

Analytics

Analysis of **community transmission** › **Detection and identification** of citizens at risk; possible close contacts › **Geolocation** of **confirmed cases** and suspected cases › **Proposing** scenarios for **segmented isolation** or **progressive deconfinement** › **Population segmentation** **Predicting the evolution** of the epidemic/pandemic outbreak

A comprehensive solution for self-triage, for directed diagnostic guidelines and for the remote management of patients with COVID19

©Copyright 2021 NTT DATA Spain and Affiliates.

Success Cases

ehCOS by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

REMOTE HEALTH SERVICES PLATFORM HOSPITAL SANT JOAN DE DEU

Challenge

Hospital Sant Joan de Déu de Barcelona makes use of the RHS platform as a patient portal. The platform provides digital channels of care and non-in-person interaction between patients, tutors and hospital professionals.

Solution

Remote Health Services is a platform that combines digital communication channels in order to promote communication, participation and remote collaboration between professionals and users.

Outcomes

A new model for the provision of services complementary to the current one and supported by ICT, facilitating the work of professionals and making institutions more efficient.

Family:

- Direct communication with your professional.
- Avoid displacements
- Time saving.
- Cost reduction.
- Accessibility.

Hospital:

- New models of care / relationship. Improves resource efficiency.
- New clients, without borders.
- Improved inclusion of dependent people.

Professionals:

- Encourage the relationship between the professional and the user.
- Efficient monitoring of users.
- Direct communication with the user.

+10.000 Communications / year

4.000 Completed questionnaires

10.000 Patients Treated

1,66M Population

©Copyright 2021 NTT DATA Spain and Affiliates.

TELEHEALTH SERVICES FOR THE VALENCIAN COMMUNITY

GENERALITAT VALENCIANA
Conselleria de Sanitat Universal i Salut Pública

Fondo Europeo de Desarrollo Regional
Una manera de hacer Europa
UNIÓN EUROPEA

Challenge

The emergence of the COVID-19 pandemic and the need for health professionals of the Conselleria de Sanitat Universal i Salut Pública (CSUSP) to have the possibility of providing healthcare remotely, in those cases where it is possible, always integrated into the clinical station and through a single platform on which integrations are implemented with the rest of the CSUSP's own systems.

Solution

The Valencian health system is implementing ehCOS Remote Health to increase its capacity to attend citizens and improve the safety of professionals and patients during care. Moreover, providing citizens with unique access to services.

Outcomes

Provide remote clinical services for patient diagnosis, counseling and monitoring, including tools that proactively engage patients to make them much more aware of their own health concerns.The public health user has access to the services offered by the single clinical station from its patient portal available both on the web and in APP.

Potential population **5M**

Healthcare professionals using the system **+ 15,000**

©Copyright 2021 NTT DATA Spain and Affiliates.

PATIENT'S PERSONAL HEALTH FOLDER BY THE ASTURIAN HEALTH SERVICES

SERVICIO DE SALUD
DEL PRINCIPADO DE ASTURIAS

Challenge

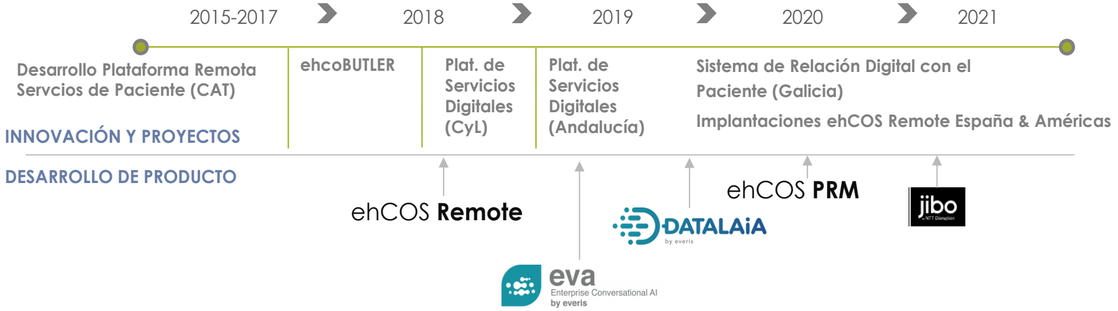
The pandemic caused by COVID-19 has been an accelerator for the development and use of telemedicine, such as virtual medical consultation, and has shown its usefulness, being able to establish hybrid care itineraries that combine face-to-face care with remote care depending on the needs of the patient and other aspects such as safety (thus reducing the risk of contagion inherent in visits to medical centers and hospitals).

Solution

Development, implementation, start-up and subsequent maintenance of the Personal Health Folder "MiAsturSalud", an electronic application that allows people to access, manage and share their health and wellness information with healthcare professionals. In addition to health information, the Personal Health Folder in most cases includes other services, such as virtual medical consultation, informative material or online courses and training.

Outcomes

The Personal Health Folder as a unique digital space that contains information related to the health of users. Omnichannel communication that guarantees the response to the information and communication needs of users, whatever the communication channel they use.It contributes to providing a better, more accessible service, and it helps to empower people when it comes to managing their health. By offering patients access to their medical information, being able to schedule appointments, communicate with health professionals or record certain data by writing them directly or collected through devices, among other services, the Personal Health Folder constitutes a very useful instrument for prevention and The health promotion.



Potential population 1M

©Copyright 2021 NTT DATA Spain and Affiliates.

OMNICHANNEL INTERACTION PLATFORM BETWEEN CITIZENS AND THE GALICIAN HEALTH SERVICE

Challenge

SERGAS identified the need to equip itself with an innovative technological tool adapted to the health context, which allows it to manage, evaluate and improve the omnichannel interaction of users with the health system. The acquisition of these CRM capabilities is one of the keys that will allow the organization to face the challenges of Code 100 for empowerment and relationship with patients.

Solution

Creation of a CRM aimed at the healthcare sector (CRM C100) that allows to innovatively manage contacts and the digital relationship with patients / citizens, taking advantage of and enhancing the use of the organization's digital channels and services, providing it with new utilities of relationship based on the automation of contact plans and using advanced analytics to personalize the messages sent to the public.

Outcomes

To have a transversal platform to the multiple channels of attention to the citizen / patient of SERGAS, face-to-face and telematic, adding the information related to all the contacts of the same with the organization.

+1.000 Campaigns per year

2,7M Population

©Copyright 2021 NTT DATA Spain and Affiliates.

Use Cases

ehCOS by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

USE CASE 1 – COVID19 PANDEMIC MANAGEMENT

Diagnosis

COVID19 Cases Management

Patient Engagement

Clinicians

Directed diagnostic guidelines
Reviewing symptoms, scheduling an appointment and sharing diagnostic guidelines with the patient.

Instruct the patient to go to the Emergency Room of a specific Hospital.

Highly Suspicious

2

Continuous tele monitoring of patients in quarantine.
Prognosis verification, trust generation and unnecessary visits to hospitals prevention.

4

Day to day life support
Logistics management to ensure the availability of basic resources (food, medication, etc.)

6

Behavioral interventions and awareness-raising campaigns design
Sending automated information to citizens, when cases are detected in the community.

7

1

No Suspicious

End

ehCOS
Remote Health

ehCOS
Patient Relationship Management

3

5

8

Medium Suspicious

Citizens

eva
Entreprise conversational AI
by NTT DATA

Self-triage
Registry of symptoms and other relevant information using eva Chabot. Obtaining the level of suspicious on COVID 19 and automated recommendations depending on the results.

Quarantine at home
Symptoms evolution updating through self-triage form and continuous interaction with assigned clinicians.

Health monitoring
Continuous registry and monitoring of vital data and other clinical information, at home

Population segmentation
Customized campaigns and recommendations depending on the segment where the patient belongs to.

Data Analytics

Datalaia
The data & AI platform for public sector
by NTT DATA

- Analysis of community transmission
- Detection of citizens at risk and identification of user possible contacts with other citizens who tested positive
- Geolocation of confirmed cases and suspected cases
- Proposing scenarios for segmented isolation or progressive de-confinement
- Predicting the evolution of the epidemic/pandemic outbreak

©Copyright 2021 NTT DATA Spain and Affiliates.

USE CASE 2 – DIGITAL HEALTH: INTEGRATED PLATFORM

NTT DATA

Tele Visit

Tele Assistance and Tele Diagnosis

Clinicians

Citizens

My agenda
Visualize from a unique point the scheduled appointments both remote and at the hospital/clinic.

Remote assistance for time optimization
Consultation via videoconference

Health monitoring
Receiving alerts on vital data taken and completed questionnaires

Proactive data collection
Programing the assignation of different questionnaires to the patient in order to collect relevant data on their health situation and evolution.

Provide information
Sharing diagnostic guidelines and relevant clinical information with the patient.

Clinical history from a single point
Access to the complete clinical history of the assigned patients.

1 2 3 4 5 6 7 8 9 10 11 12 13

ehCOS
Remote Health

Appointment request
Request an appointment with the clinician.

eva
Enterprise conversational AI
by NTT DATA

Continuous communication
- Synchronous: chat
- Asynchronous: internal email

Health monitoring at home
Continuous registry of vital data from:
- Biodevices
- Transdermal optical imaging
- IoT Digital Home Terminal

Learning about self-care
Receiving recommendations throughout Info Health.

Symptoms checker
Self evaluation & automatic result.

mediktor

Patient Portal
360 view of all the user information coming from all the integrated systems

Access to different available services, for example:
- Pharmacy unified system
- Ecommerce platform

Data Analytics

Datalaia
The data & AI platform for public sector
by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

USE CASE 3 – BACK TO THE OFFICE

Diagnosis

COVID19 Cases Management

Data Analytics

HSE Department

Instruct the employee to quarantine at home and/or instruct him/her to go to the Emergency Room of a specific Hospital, depending on the level of suspicious.

Analysis of the cases evolution
Continuous review of the completed self-assessments by employees.

Sharing healthcare information
Providing recommendations regarding community care and lines of behavior regarding COVID19.

Suspicious

1 2 3 4 5 6

ehCOS
Remote Health

Non Suspicious

Employee

eva
Enterprise conversational AI by NTT DATA

Self-triage
Registry of symptoms and other relevant information using eva Chabot. Obtaining the level of suspicious on COVID 19 and automated recommendations depending on the results.

Allowed to got o client premises or company offices.

Repeat self-triage
Employees who tested positive are asked to keep filling the self-triage until the result is negative.

Analysis of the level of contagion among company employees

Detection of employees at risk and identification of possible contacts with other employees who tested positive.

Evolution of confirmed and suspected cases and scenarios for progressive back to normal situation proposal.

Datalaia
The data & AI platform for public sector by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

USE CASE 4 – DAY TO DAY CHECK-IN ASSESSMENT

Diagnosis and Notification

Monitoring and Preventing

HSE Department

Instruct the employee to quarantine at home and/or instruct him/her to go to the Emergency Room of a specific Hospital, depending on the level of suspicious.

Suspicious

Segmentation
Identification of employees who have been in contact with positive cases.

Vital data monitoring and remote communication
Receiving alerts on vital data, reviewing vital data evolution and establishing communication with employees via chat video call, email.

Analysis of the cases evolution
Continuous review of the completed self-assessments by employees.

Sharing healthcare information and collecting feedback
Providing recommendations regarding community care and lines of behavior regarding COVID19. and assigning questionnaires and surveys to employees.

1 2 3 4 5 6 7 8 9

ehCOS Remote Health

Employee

eva Enterprise conversational AI by NTT DATA

Self-triage
Registry of symptoms and other relevant information using eva Chabot. Obtaining the level of suspicious on COVID 19 and automated recommendations depending on the results.

Automatic alerts
Employees from the same department of employees who tested positive are notified and asked to constantly take vital data measures and to perform COVID19 questionnaire.

Real-time vital signs measurements using only a smartphone, laptop or tablet camera. From remote or on-premises. Just by looking at the device's camera.

Awareness-raising campaigns design
Automatically receiving recommendations and giving feedback by fulfilling surveys and questionnaires

Data Analytics

Datalaia The data & AI platform for public sector by NTT DATA

Analysis of the level of contagion among company employees

Detection of employees at risk and identification of possible contacts with other employees who tested positive.

Evolution of confirmed and suspected cases and scenarios for progressive back to normal situation proposal.

©Copyright 2021 NTT DATA Spain and Affiliates.

USE CASE 5 – VACCINATION CAMPAIGN

Target identification

Patient Engagement

Organization

Citizens

Contact Plan definition
Objective: Enhancing citizens to get vaccinated

1

Population segmentation
Citizens who did not attend to the appointment for receiving the vaccine.

2

End

Not vaccinated

3

User creation
Automatically creation of an account in ehCOS Remote an notification via email.

ehCOS PRM

Continuous patient education
Providing information, assigning gamifications and questionnaires.

4

Education on healthcare issues
Receiving information on vaccination, healthcare related issues.

5

Communication
Establish direct communications via videoconferences, chat and email.

7

Continuous feedback
Fulfillment of questionnaires with health situation and other relevant information.

6

Patient healthcare follow-up
Vital signs – device integration, questionnaires and patient self-assessment.

9

Vital signs monitoring
Vital signs measurement and registration manually or via device integration.

8

ehCOS Remote

Data Analytics

Analysis of community vaccination ratios

Datalaia
The data & AI platform for public sector by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

USE CASE 6 – CHRONIC DISEASES MONITORING

Tele assistance and tele diagnosis

Tele visit

Patient suffering from a Chronic Disease

ehCOS Remote Health

1 **Health monitoring at home**
Continuous registry of vital data from:
- Biodevices
- Transdermal optical imaging: Real-time vital signs measurements using only a smartphone, laptop or tablet camera. From remote or on-premises. Just by looking at the device's camera.
- IoT Digital Home Terminal

2 **Health monitoring**
Receiving alerts on taken measures and following up its evolution

3 **Continuously providing healthcare status updates**
Answering questionnaires.

4 **Proactive data collection**
Programing the assignation of different questionnaires to the patient in order to collect relevant data on their health situation and evolution.

5 **Provide information**
Sharing diagnostic guidelines and relevant clinical information with the patient.

6 **Learning about self-care**
Answering gamifications, receiving tips and recommendations throughout Info Health.

7 **Day to day life support**
Logistics management to ensure the patient is taken care and has his medication available

8 **Remote assistance for time optimization**
Consultation via videoconference. Doctors working with the residences are usually attending more than one residence.

9 **Self-triage**
Registry of symptoms and other relevant information using a Chabot in order to ask for a remote consultation with a doctor.

10 **Group videoconferences**
A session with doctors and patients suffering from the same disease, therapy sessions, sessions with the patient and his relatives, etc.

Data Analytics

Datalaia
The data & AI platform for public sector by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

USE CASE 7 – ELDERLY LIVING RESIDENCES

NTT DATA

Patient Monitoring

Tele assistance and Tele visit

Doctor

Patient / Patient Tutor

Proactive data collection
Programing the assignation of different questionnaires to the patient in order to collect relevant data on their health situation and evolution.

Non-dependent patient

Vital data and other measures monitoring
Receiving alerts on vital data measures taken by the patient himself at home and monitoring the evolution of the different parameters.

Proactive data collection
Programing the assignation of different questionnaires to the patient in order to collect relevant data on their health situation and evolution.

Remote assistance for time optimization
Consultation via videoconference. Doctors working with the residences are usually attending more than one residence.

Group videoconferences
A session with a doctor including several people connected from different devices: patient, relative, patient's tutor, nurse and doctor.

1 2 3 4 5 6 7 8 9 10

ehCOS Remote Health

High Level of Dependency

Tutor assignation to the patient
For dependent patients a relative or the nurse in the residence are able to access the patient portal using their own credentials.

Health monitoring at home
Biodevices integration and other Smart Home systems that collect data from sensors installed at the patient's premises.

Health status updating
Continuous Interaction with eva chatbot for easily providing the doctor with relevant information on the patient status and evolution.

Proactive Call Center
Based on the interactions with eva chatbot, automatic appointment scheduler with the doctor.

Data Analytics

Datalaia
The data & AI platform for public sector
by NTT DATA

©Copyright 2021 NTT DATA Spain and Affiliates.

NTT DATA

We´re here to help patiets, to help clinical professionals & to help you.

ehCOS
We ´re here to help
by NTT DATA

Thank you