



Maximizing Aging in Place through Remote Care Monitoring

Presented By: Alan Ruth, CEO, GRTHealth Inc.

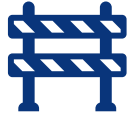
Introduction



► GRTHealth

- Established in 2019, based on 25+ years of wireless remote monitoring products and services in Life Sciences.
- Focused on remote care monitoring for the elderly, living in the community with frailties.
- Served over 30,000 concurrent users, daily, through a rapidly scalable and deployable solution, across Canada.
- US, Japanese and European versions are currently available.
- Employs a hardware-agnostic solution, through an integrated and centralized cloud-based portal.

GRTHealth Service Goals



Minimize Barriers

Minimize barriers to seniors, living with frailties, that limit their ability to successfully age in place, in a community setting.



Reduce Obstacles

Reduce obstacles to discharging Alternate Level of Care (ALC) seniors.



Minimize HHR Requirements

Minimize HHR requirements for seniors requiring support in the community, while maintaining the same level and quality of care.



Reduce Demands

Reduce the demands on institutional long-term care for seniors.



Reduce ED Visits

Reduce ED visits for seniors with preventable demands.



Minimize Health Issues

Minimize health issues for seniors living in the community with chronic diseases.



Integrated View of Health and Safety

Holistic view of each senior's health and safety status in real-time and on a longitudinal basis.

Benefits to Health Service Providers

GRTHealth solutions empower service providers to:

- ▶ Support seniors to age safely at home longer.
- ▶ Detect health and wellness risks earlier.
- ▶ Focus resources where they are needed most.
- ▶ Make data-driven care decisions.
- ▶ Reduce avoidable hospitalizations and healthcare costs.

RCM Technologies

GRTInsight® Platform



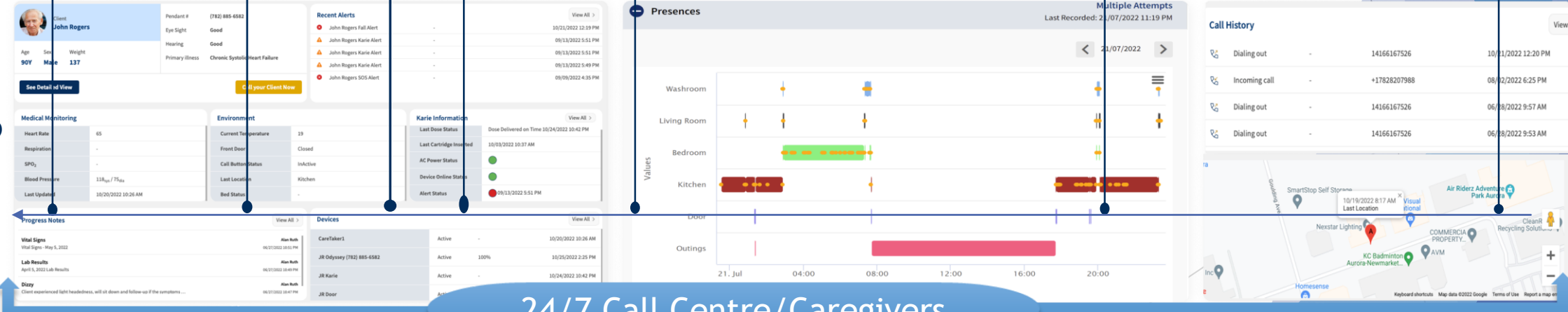
- GRTH3® Vital Signs Monitoring**
- AVA™ Virtual Companion**
- AVA™ Wellness and Reminders**
- GRTMed® Medication Adherence**
- Oasis® Passive Monitoring**
- OdysseyGO® Personal Alert Device**



Wellness and Reminders



GRTInsight®
Monitoring Platform



24/7 Call Centre/Caregivers

AI Insights

RCM Technologies

- ▶ **Active** - including wearables, or devices that require the user to interact with them.
- ▶ **Passive** - including monitoring devices that assess and report on a situation, independent of the user.
- ▶ **Clinical** - devices that monitor and report on clinical aspects of a client's health condition.
- ▶ **Virtual** - AI enabled virtual supports.

Types of Monitoring

Reactive

- ▶ **Point in Time** - falls, wandering, incontinence, and others.

Active and Proactive

- ▶ **Longitudinal** - Aging process changes including mental, physical, social, clinical and others. Proactive and pre-emptive identification of health and safety risks, before they become catastrophic.
- ▶ **Cohort** - Comparison to 'typical' seniors in a cohort for identifying preventable issues.

Monitoring Integration

- ▶ Integration of results from individual devices to provide ‘compounded’ results.
 - ▶ Fall detection and location in the home.
 - ▶ Increased frequency of bathroom trips.
- ▶ A holistic view of each individual’s health and safety characteristics.
- ▶ Individualized health and safety parameters.
- ▶ Individualized care plans and escalation paths.

GRTInsight® Integrated Monitoring Platform

The dashboard provides a comprehensive overview of a client's health and monitoring status. It includes sections for client information, recent alerts, medication schedules, medical monitoring, environment, progress notes, and a list of devices with their current status and battery levels. A map shows the current location of the client's device.

Dashboard
Dashboard > Client Summary

Logged in as: Admin John Doe

Client: Christopher Smith

Age: 78, Sex: Male, Weight: 137.5 lbs

Temperament: Difficult, Eye Sight: Limited, Hearing: Normal, Primary Illness: Diabetes, Hearing Disease

Recent Alerts

Alert	Client	Time
No wake up	John Doe	07:10 AM, 12/11/2019
Absence of Movements	John Doe	07:10 AM, 12/11/2019
Missed Medications	John Doe	07:10 AM, 12/11/2019
No wake up	John Doe	07:10 AM, 12/11/2019
Absence of Movements	John Doe	07:10 AM, 12/11/2019
Missed Medications	John Doe	07:10 AM, 12/11/2019

Medication

Next Medication: 9:00 AM, 15/11/2020

Last Missed Medication: 9:00 AM, 15/11/2020

Next Cartridge Change: 15 Dec, 2020

Medical Monitoring

Parameter	Status
Heart Rate	Difficult
Respiration	Limited
EKG	Normal
SPO ₂	Diabetes, Hearing Disease
Blood Pressure	120mm / 75mm

Environment

Parameter	Status
Current Temperature	20.5 °C
Front Door	Closed
Call Button Status	Active
Last Location	Bed Room
Bed Status	Unoccupied

Linked Accounts: 05 (Add New, View All)

Linked Devices: 12 (Add New, View All)

Progress Notes

Title of the progress note comes here	Author	Date
Steve Caregiver	2/11/2020 7:40PM	
Steve Caregiver	2/11/2020 7:40PM	
Steve Caregiver	2/11/2020 7:40PM	
Steve Caregiver	2/11/2020 7:40PM	

Devices

Sensor	Status	Maintenance	Battery
Sensor Bedroom	Active	Maintenance: Ok	Battery: 90%
Sensor Entrance	Active	Maintenance: Pending	Battery: 10%
Sensor Living room	Active	Maintenance: Ok	Battery: 90%
Nomad click	Off	Maintenance: Pending	Battery: 90%
Sensor Bedroom 2	Active	Maintenance: Ok	Battery: 90%
Sensor Entrance 2	Off	Maintenance: Ok	Battery: 90%

Map

BTE Location: Bedroom, Movement: None

Current Location: 124 South St, Toronto

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Cloud-Based - Can be securely operated on a centralized or decentralized basis.

Full Integration with remote monitoring devices - All hardware is integrated and centrally reports to the platform.

Roles Based Access- Roles based access and integrated charting based on roles.

Hardware Agnostic and Modular - The platform is designed to new and evolving monitoring devices to be continually integrated

PHIPPA/HIPAA Compliant

Patented in the US

Canadian, US, Japanese and European versions available

OdysseyGO® - Personal Alert Device



Features

- Outdoor and Indoor Locating & Personal Alert Device (Cellular & Bluetooth)
- Nation-wide coverage (subject to cellular coverage).
- Hierarchy of contacts programmed to device.
- Clients and care-givers can initiate and communicate verbally through the device.
- 2-way Voice Communications
- Outbound Text Messaging
- Geo-fencing
 - Inbound and Outbound (min. 300m)
- Fall Alerting
- SOS Alert

Oasis® - In-Home Passive Monitoring

- Responsive to movement and lack of movement in the home.
- Wandering behaviours can be captured via front door sensor.
- Motion and activity is captured in 10 second increments.
- Food security is captured through fridge opening and closings.
- Can identify transfer issues and 'stuck' in bathroom situations.
- Can identify trends in behavioural and functional changes.
- **AI-enabled for proactive and pre-emptive trend analysis and reporting through GRTInsights™.**

Examples:

Other:
- Bed Movement
- Pressure

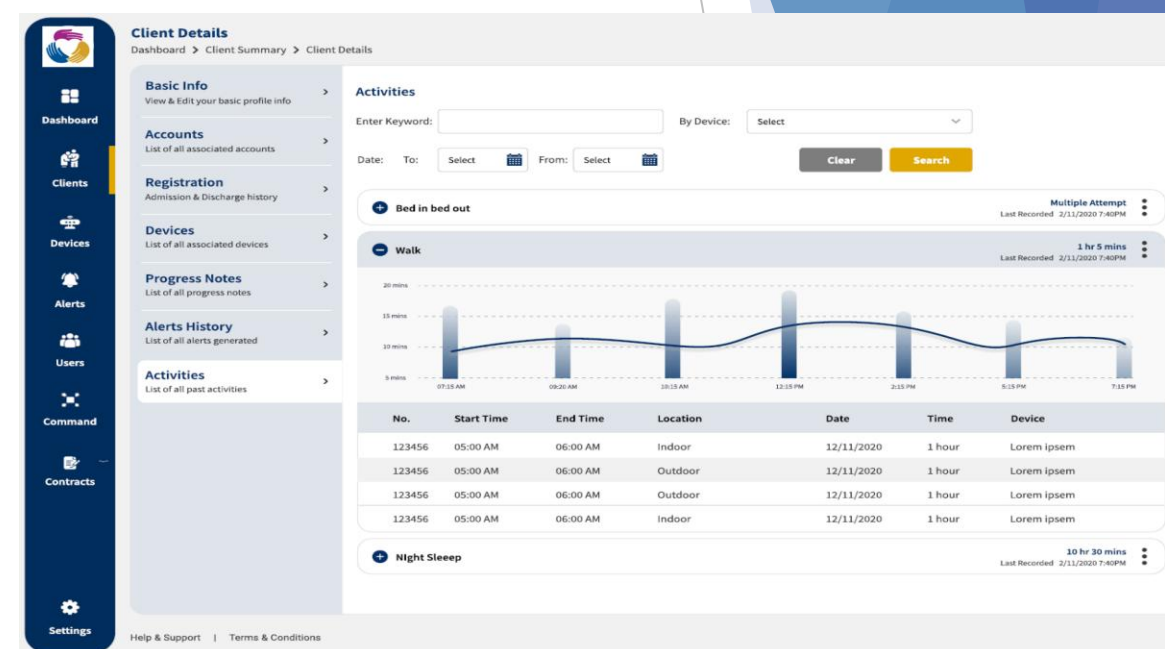
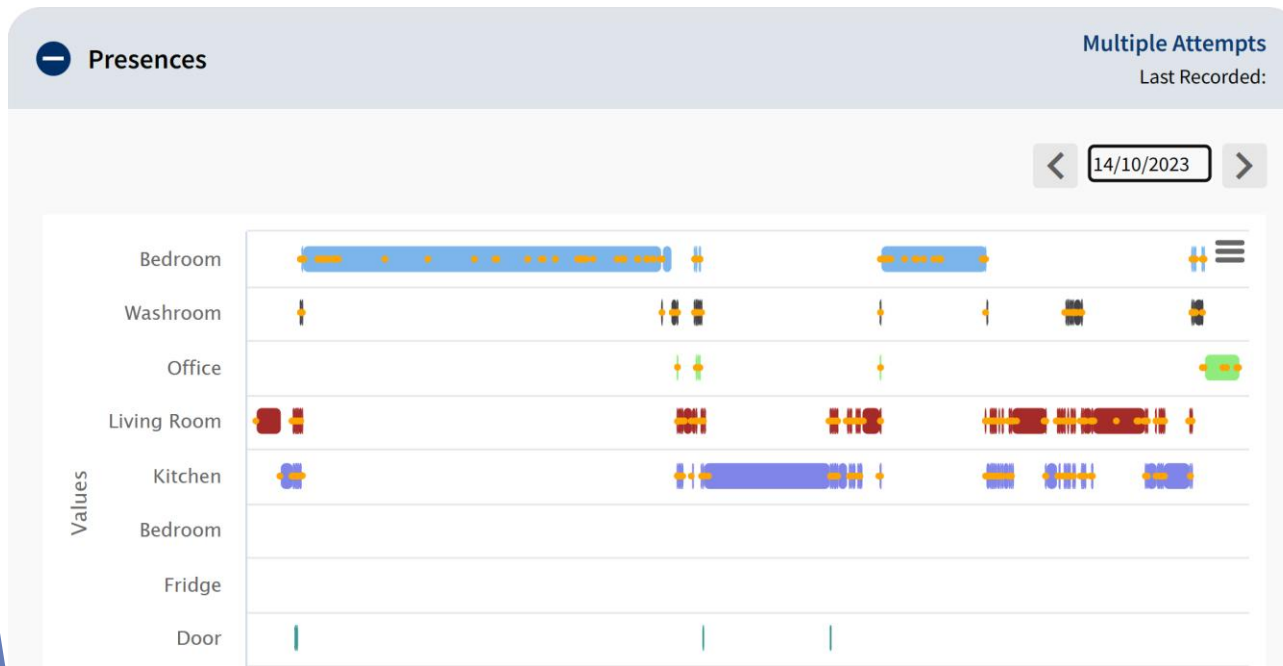


Motion Sensor



Door Sensor

GRTInsight® - In-Home Monitoring: Client Location & Activity

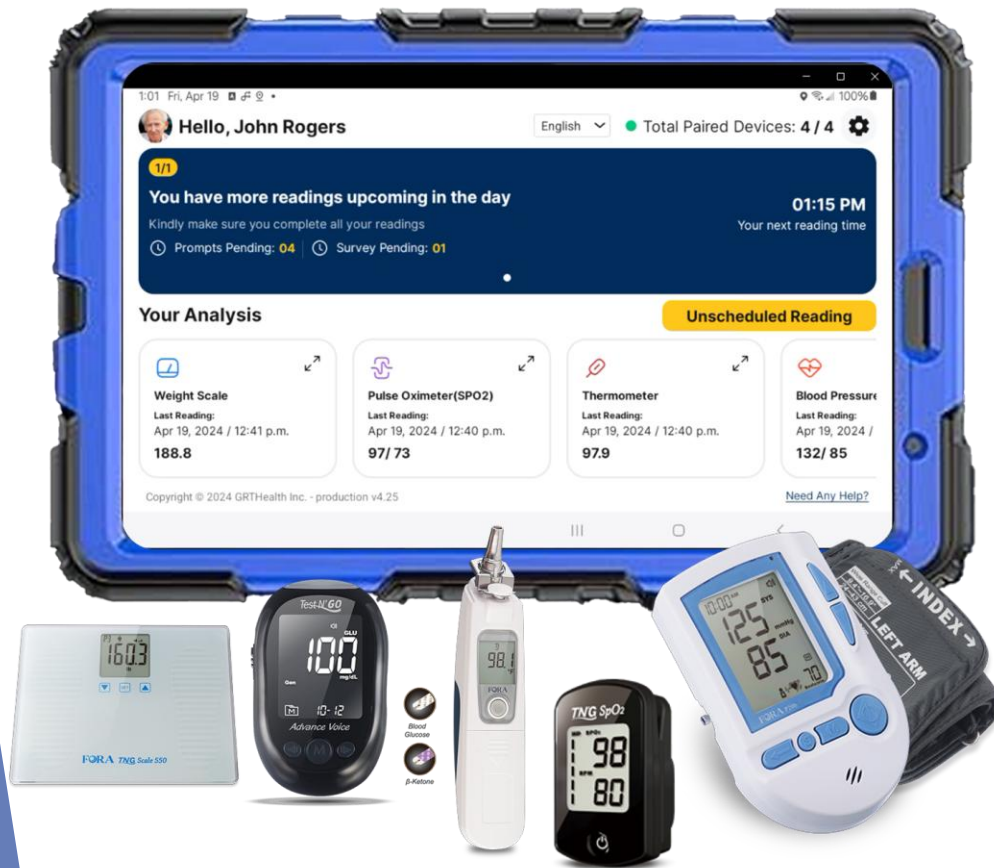


System shows client room location, duration in each, activity levels, and other important health and safety information.

AI/Statistical Alert Model - Reactive, Active and Proactive

- ▶ **Point in Time Alerting**
 - ▶ Based on point in time pattern analysis and changes
- ▶ **Longitudinal Alerting**
 - ▶ Based on changes in patterns over time
- ▶ **Cohort Comparison**
 - ▶ Based on comparison to client cohorts
- ▶ **Overall Changes in Health and Safety Inputs**
 - ▶ Multi-input variations from health and safety standards

GRTH³® - Home Health Hub - Chronic Disease Management with Local and Remote Reporting

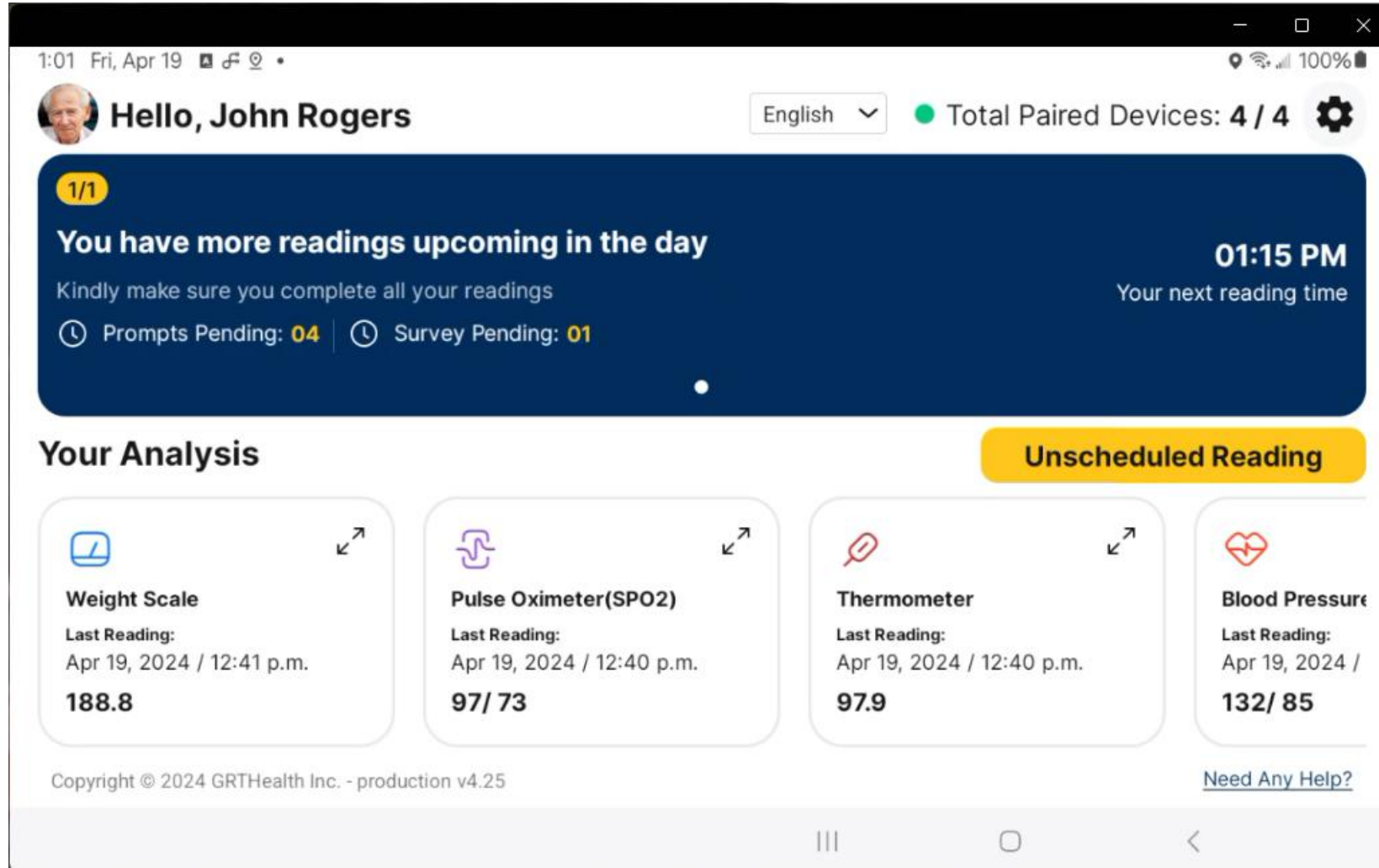


- Heart Rate
- Blood Pressure
- SPO₂: Blood Oxygen Saturation
- Glucose
- Temperature
- Weight
- Spirometry
- User-defined surveys
- Fully Automated Inputs and/or BYOD*
- Continuous and Discrete monitoring
- Scheduled and Unscheduled Readings
- FDA, CE and Health Canada approved devices

* Bring Your Own Device

GRTH³® - Home Health Hub™

- In-Home Client Portal -



GRTInsight®- Home Health Monitoring

- Centralized Portal Monitoring -



Dashboard

Clients

Devices

Alerts

Users

Command

Contracts

Spencer

HHH

Settings

Clients

Clients > Client List > Client Summary

English

Logged in as: Admin

Admin



Client

John Rogers

Pendant #

(548) 343-9961

Eye Sight

Good

Hearing

Good

Primary illness

Chronic Systolic Heart Failure

Age

92Y

Sex

Male

Weight

137

See Detailed View

Call your Client Now

Add Note

Recent Alerts

View All

Test Alert 23 - 18 Pass 2.2

-

04/10/2024 5:32 AM

Test Alert 23 - 18 Pass 2.2

-

04/10/2024 5:22 AM

Test Alert 23 - 18 Pass 2.2

-

04/09/2024 5:08 PM

Test Alert 23 - 18 Pass 2.2

-

04/09/2024 4:47 PM

Test Alert 23 - 18 Pass 2.2

-

04/09/2024 7:14 AM

Client Summary

HHH Summary

Blood Pressure

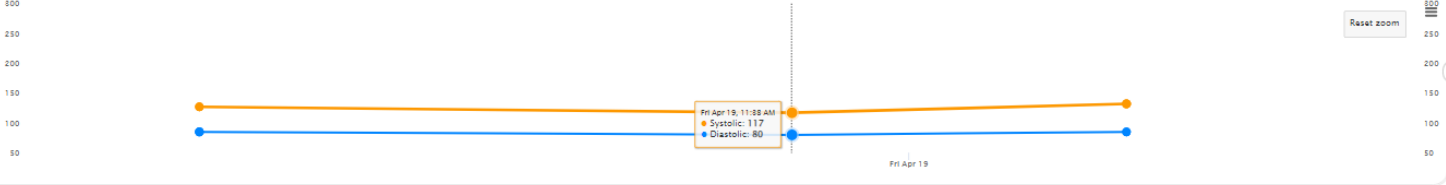
132 / 85

Systolic Diastolic

Apr 19, 2024 - 12:39 PM

History

Systolic (60-255 mm/Hg) Diastolic (50-195 mm/Hg)



Surveys & Prompts / Notifications

Export

Name	Type	Channel	Trigger Time	Status	Submission Time	Actions
UNSCHEDULED	Prompt (Unscheduled)	Weight Scale	Apr 19, 2024 - 12:41 PM	Completed	Apr 19, 2024 - 12:41 PM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Pulse Oximeter(SPO2)	Apr 19, 2024 - 12:40 PM	Completed	Apr 19, 2024 - 12:40 PM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Thermometer	Apr 19, 2024 - 12:40 PM	Completed	Apr 19, 2024 - 12:40 PM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Blood Pressure	Apr 19, 2024 - 12:39 PM	Completed	Apr 19, 2024 - 12:39 PM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Pulse Oximeter(SPO2)	Apr 19, 2024 - 11:40 AM	Completed	Apr 19, 2024 - 11:40 AM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Weight Scale	Apr 19, 2024 - 11:40 AM	Completed	Apr 19, 2024 - 11:40 AM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Thermometer	Apr 19, 2024 - 11:39 AM	Completed	Apr 19, 2024 - 11:39 AM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Blood Pressure	Apr 19, 2024 - 11:38 AM	Completed	Apr 19, 2024 - 11:38 AM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Weight Scale	Apr 19, 2024 - 09:53 AM	Completed	Apr 19, 2024 - 09:53 AM	View Answer
UNSCHEDULED	Prompt (Unscheduled)	Pulse Oximeter(SPO2)	Apr 19, 2024 - 09:52 AM	Completed	Apr 19, 2024 - 09:52 AM	View Answer

GRTInsight® - Centralized Documentation & Records Management

Cloud-Based - can be securely operated on a centralized or decentralized basis.

Bridges Recording Gaps across Community Providers - homecare, private care providers, family, etc.

Integrated charting based on caregiver role - nursing, pharmacist, MD, homecare aid, etc.

Centralized Communication - Integrated community charting provides a centralized tool for inter-and intra-caregiver communications.

PHIPPA/HIPAA compliant

The screenshot displays the GRTInsight dashboard for a client named Christopher Smith. The interface includes a sidebar with navigation options: Dashboard, Clients, Devices, Alerts, Users, Command, Contracts, and Settings. The main content area is divided into several sections:

- Client Summary:** Displays client information (Age: 78, Sex: Male, Weight: 137.5 lbs) and medical history (Diabetes, Hearing Disease).
- Medical Monitoring:** A table showing vital signs and symptoms (Heart Rate, Respiration, EKG, SPO₂, Blood Pressure).
- Recent Alerts:** A list of alerts (No wake up, Absence of Movements, Missed Medications) with timestamps.
- Environment:** A table showing environmental data (Current Temperature, Front Door, Call Button Status, Last Location, Bed Status).
- Devices:** A table showing device status (Sensor Bedroom, Sensor Entrance, Sensor Living room, Nomad click, Sensor Bedroom 2, Sensor Entrance 2).
- Progress Notes:** A list of progress notes with titles and timestamps.
- Medication:** A section showing medication history (Next Medication, Last Missed Medication, Next Cartridge Change).
- Linked Accounts:** A section showing linked accounts (05) and linked devices (12).
- Map:** A map showing the current location (124 South St, Toronto).

The dashboard is logged in as Admin John Doe. The footer includes the GRTHealth logo and copyright information: Copyright © 2021 GRTHealth Inc.

Virtual and AI Services

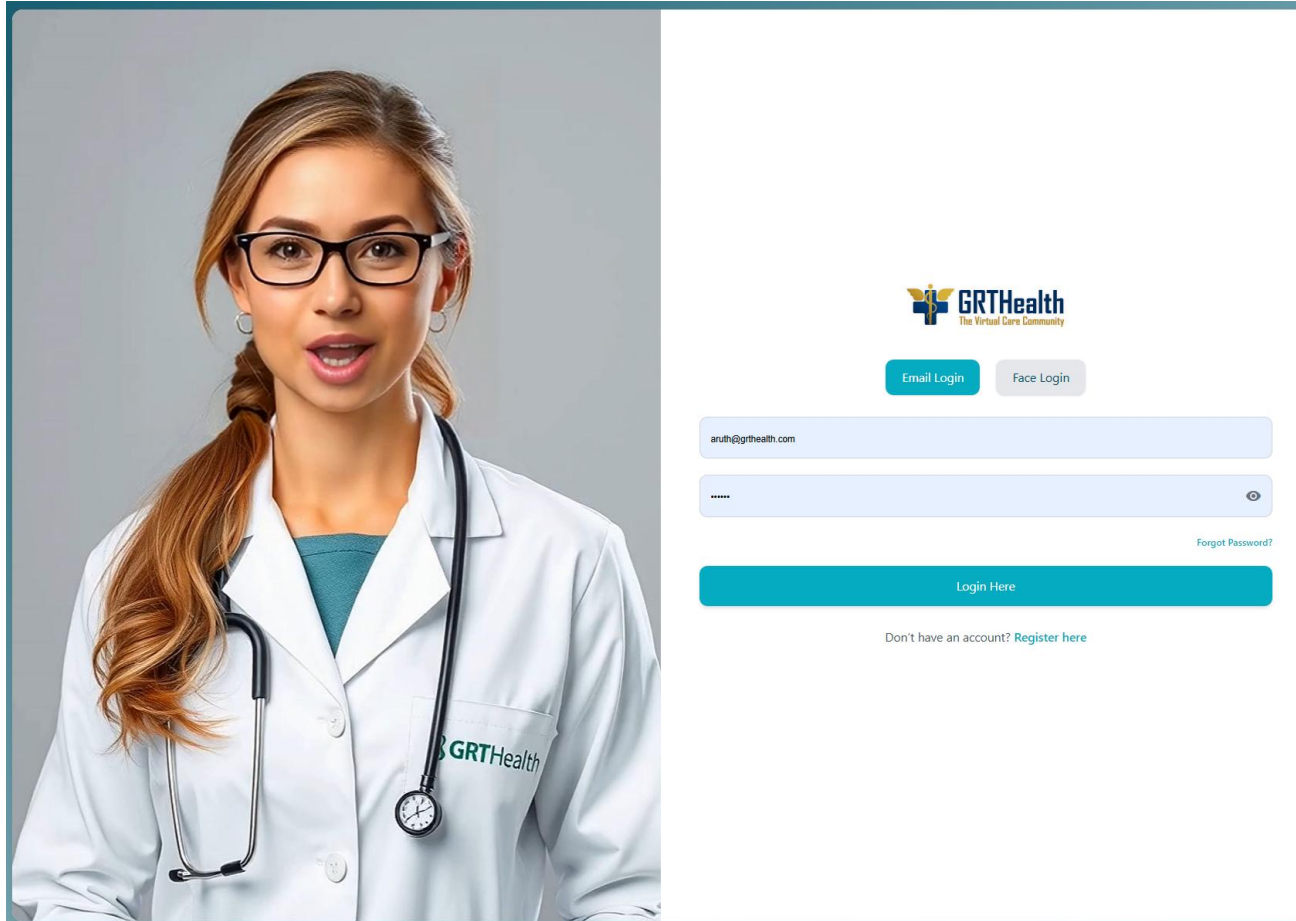
AVA™ Reminder System

- Fully automated virtual call-out system, in natural language, to provide:
 - Battery Reminders
 - Medication Reminders
 - Wellness checks and follow-ups
- Calls can be scheduled or event driven through the monitoring system.
- Interprets and summarizes each interaction, which is permanently documented in the GRTInsight portal.
- Based on the interaction, there are three levels of escalation for caregiver follow-up:
 - Non-urgent - documented for later review.
 - Urgent - documented and alert is raised for caregiver follow-up.
 - Emergent - 'Hot' transfer to a live call centre operator.

AVA™ Wellness

- Fully automated wellness call-out system, in natural language, to assess client specific health and wellness issues.
- Proactively identifies health and safety issues before they become catastrophic.
- Utilizes a ‘human-in-the-loop’ model to ensure meaningful caregiver involvement.
- Interprets and summarizes each interaction, which is permanently documented in the GRTInsight portal.
- Based on the interaction, there are three levels of escalation for caregiver follow-up:
 - Non-urgent - documented for later review.
 - Urgent - documented and alert is raised for caregiver follow-up.
 - Emergent - ‘Hot’ transfer to a live call centre operator.

AVA™ Virtual Companion



- Creates a personalized companion, based on a physical look, ethnicity, language, gender, interests, background, and other features.
- Utilizes a virtual guide to facilitate set-up.

AVA™ Virtual Companion



AI

 **GRTHealth**
The Virtual Care Community

Wed, Feb 18,
2026, 16:18:18

Logout



 **Alan:** my headaches have cleared up so they are no longer an issue, thank you for asking

 **Bob** I'm really glad to hear your headaches have cleared up, Alan. That must be a relief for you. Since you're feeling better, have you had a chance to explore any medieval art pieces or artists that caught your interest lately?

 **Bob** If you are busy, we can talk later.

Type your message...

AVA™ Virtual Companion

- Addresses social isolation through 24/7 availability and the ability to discuss topics of interest to the user.
- Connects participating Seniors with other system users to expand their social network.
- Identifies and alerts caregivers to changes in health, activity patterns, and other considerations through social interactions with users.
- Fully integrated with the GRTInsight platform, documenting and prioritizing on-going changes in a user's health and safety patterns.
- Employs a 'human-in-the-loop' delivery model.

Summary

- ▶ Modular and hardware agnostic solution.
- ▶ 24/7/365 Client Visibility.
- ▶ Provides a fully integrated view of an individual's health and safety characteristics in real-time, from multiple monitoring sources.
- ▶ Reduces Health Human Resources.
- ▶ Reduces preventable ED visits.
- ▶ Reduces institutionalization, both LTC and acute, in favor of aging in place in a community setting.
- ▶ Maximizes independent community living.
- ▶ Reduces health system costs and/or expand service availability within the same costs.

Service Providers using the GRTHealth System

(More than 200 Providers delivering service to 30,000+ System Users)



Recent Projects

- ▶ **University of Toronto (Canada): Department of Psychology**
 - ▶ Empathy and Artificial Intelligence.
- ▶ **Carleton University (Canada): Department of Electronics**
 - ▶ Integration of Power monitoring with in-home activity monitoring.
- ▶ **Kyoto University (Japan): Faculty of Engineering - Informatics**
 - ▶ Application of hyper-democracy to AI-based medical decision-making.
 - ▶ Expanding social networks using artificial intelligence and virtual companions.
- ▶ **Nagoya: System Testing**
 - ▶ In-home system being tested in several homes and a nursing home.

For Further Information:

GRTHealth Inc.

Alan Ruth, CEO

GRTHealth Inc.
45 Eric T. Smith Way, Unit 7
Aurora, Ontario L4G 3Z8
CANADA

Tel: +1 (416) 616-7526

Email: aruth@grthealth.com

URL: www.grthealth.com

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