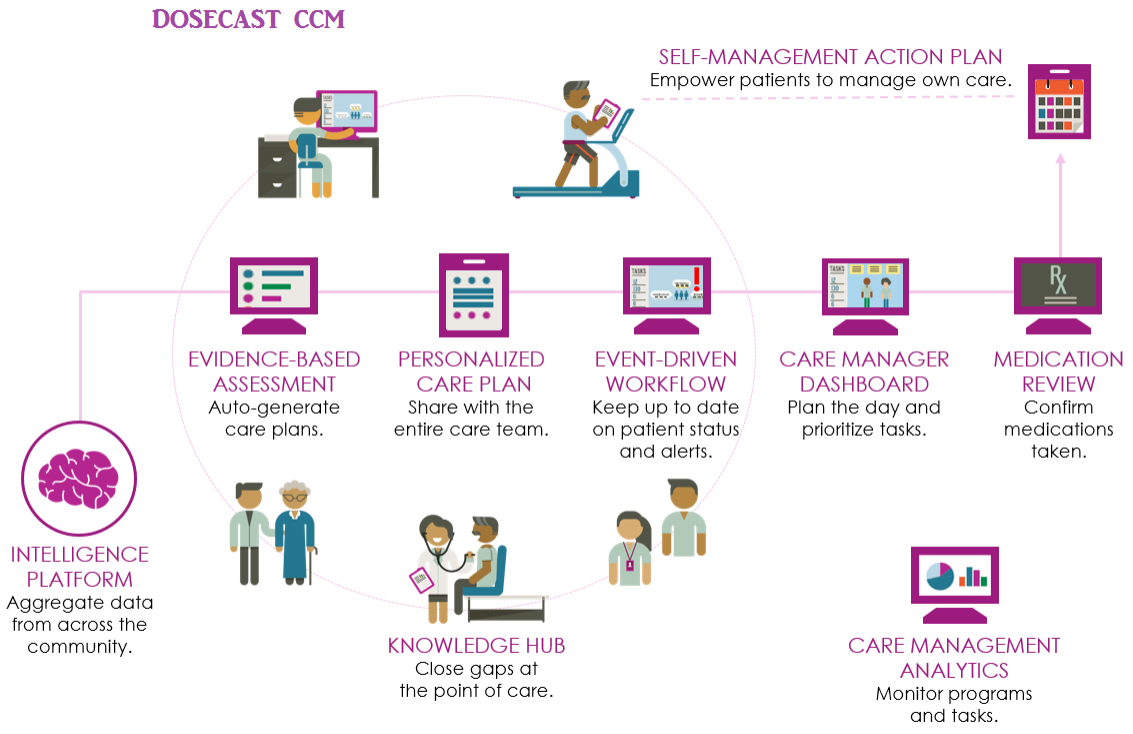
Who We are: 2
Mockup of the app 3
Technical specifications: 11
Ordering or enrolling patients for digital health services from within the EHR 11
Encounter or note creation 12
Push Notifications alerting a user 12
Logical Architecture 12
Compliance with HIPAA regulations 12
Issue Analysis 14
Solution description 16
Medication Adherence 16
Chronic Care Management - Care Plan Integration 16
Give Patients a Role in their Care 17
Financial Estimates 18
Second Revenue Source – Refill workflow process optimization 18
Revenue Model: 18
Engagement plan 20
Co-Design (Stay in Sync) 20
Adaptive Go to Market Strategy: 20
Marketing 21

Who We are:

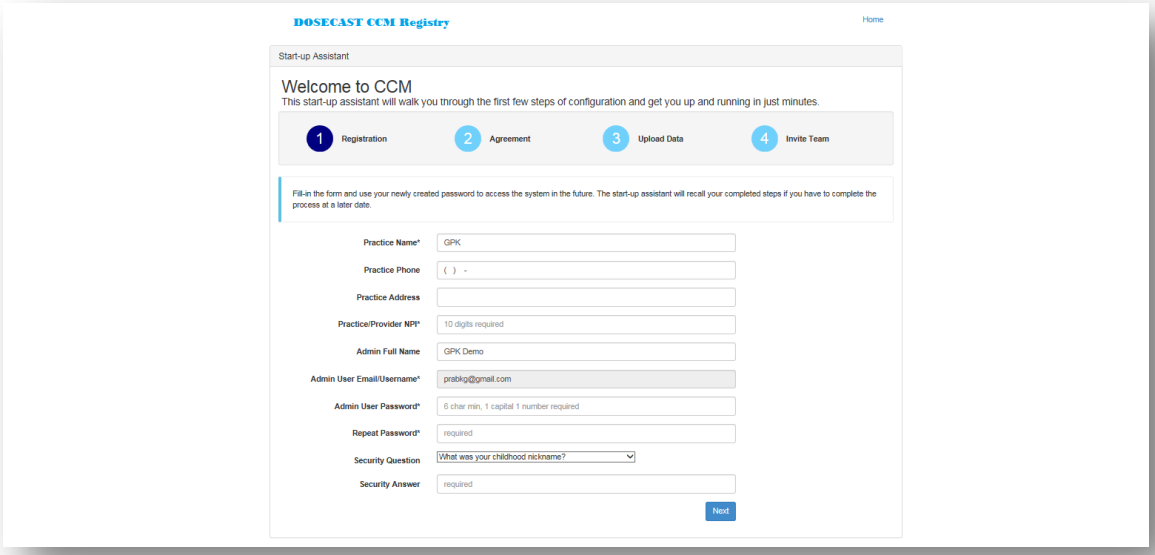
Montuno Software, founded in 2010, is a small mobile software company based in Boston, MA dedicated to empowering patients to manage their own medication adherence and improve their health through the use of mobile technology. At Montuno, we believe mobile adherence technology has the power to improve patient health and reduce healthcare cost, while facilitating communication with caregivers and researchers.

Our Mission: To help Health Systems transition to Value Based Care by better connecting them with Patients. We have put together an Innovation Solution in the pursuit of three aims: improving the experience of care, improving the health of populations, and reducing per capita costs of health care.

Mockup of the app

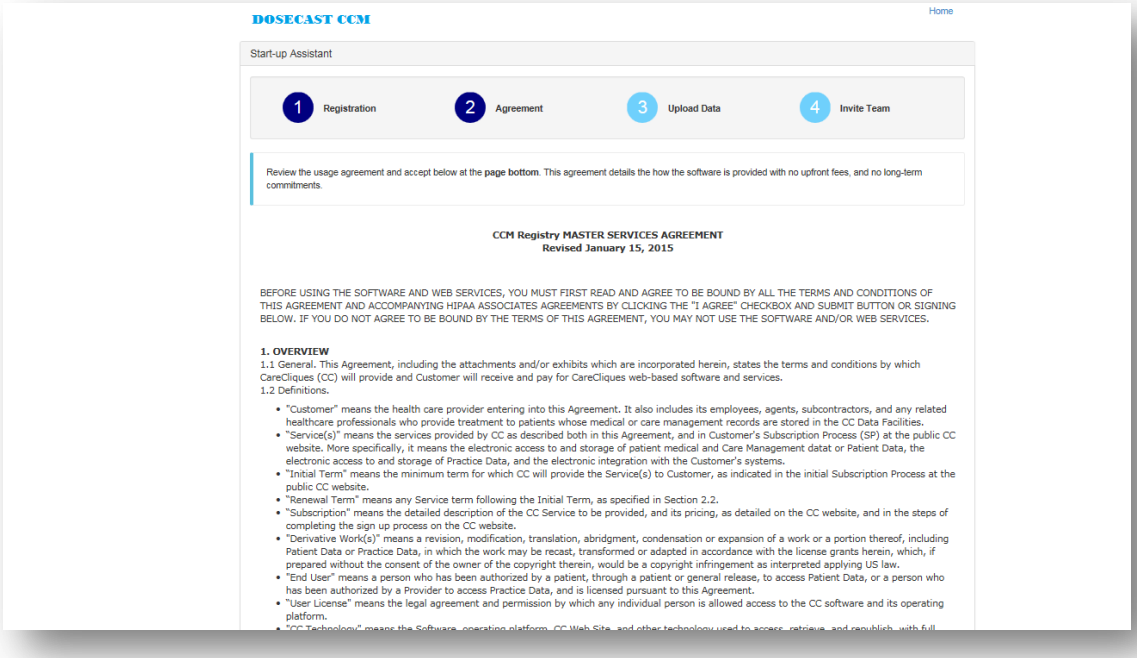


Practice On boarding

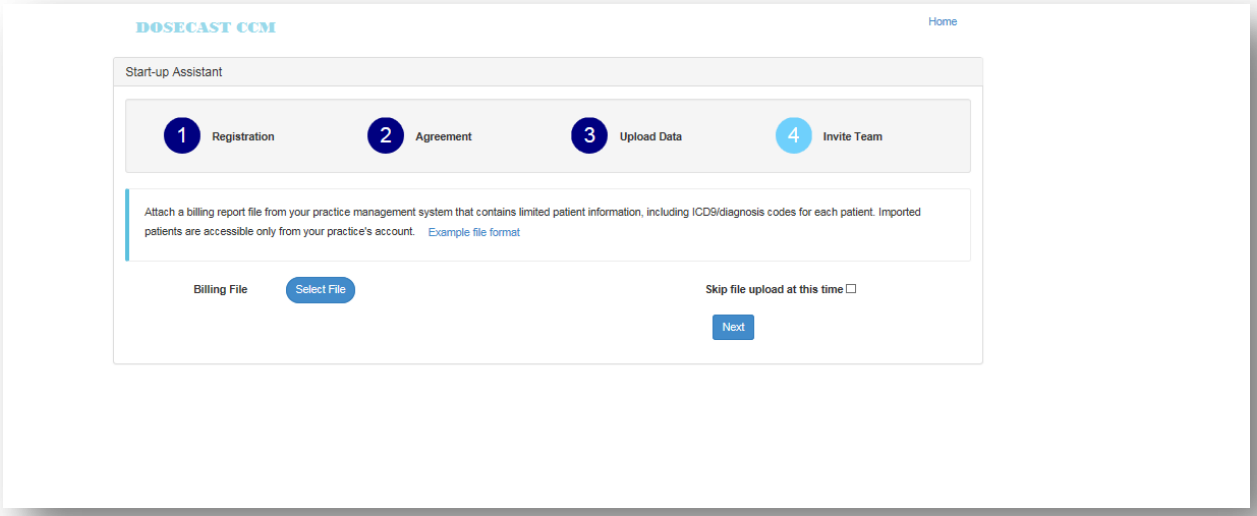


Source: Carecliques.com

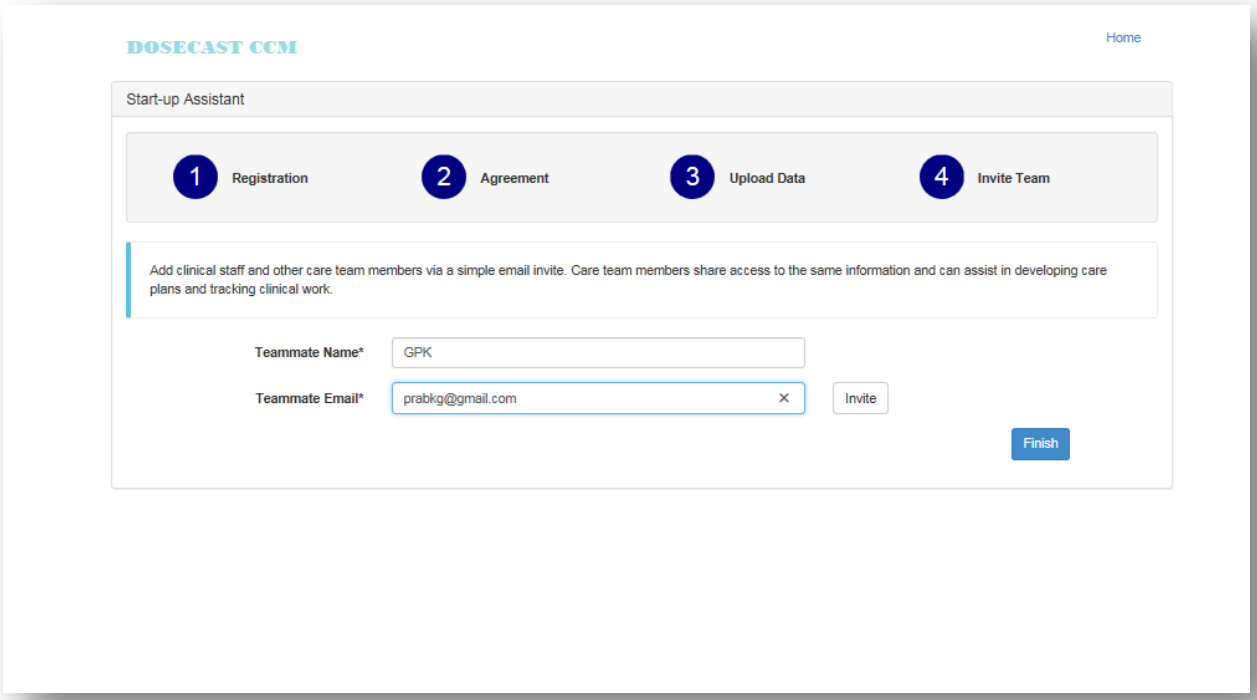
HIPAA Business Associate Consent Form



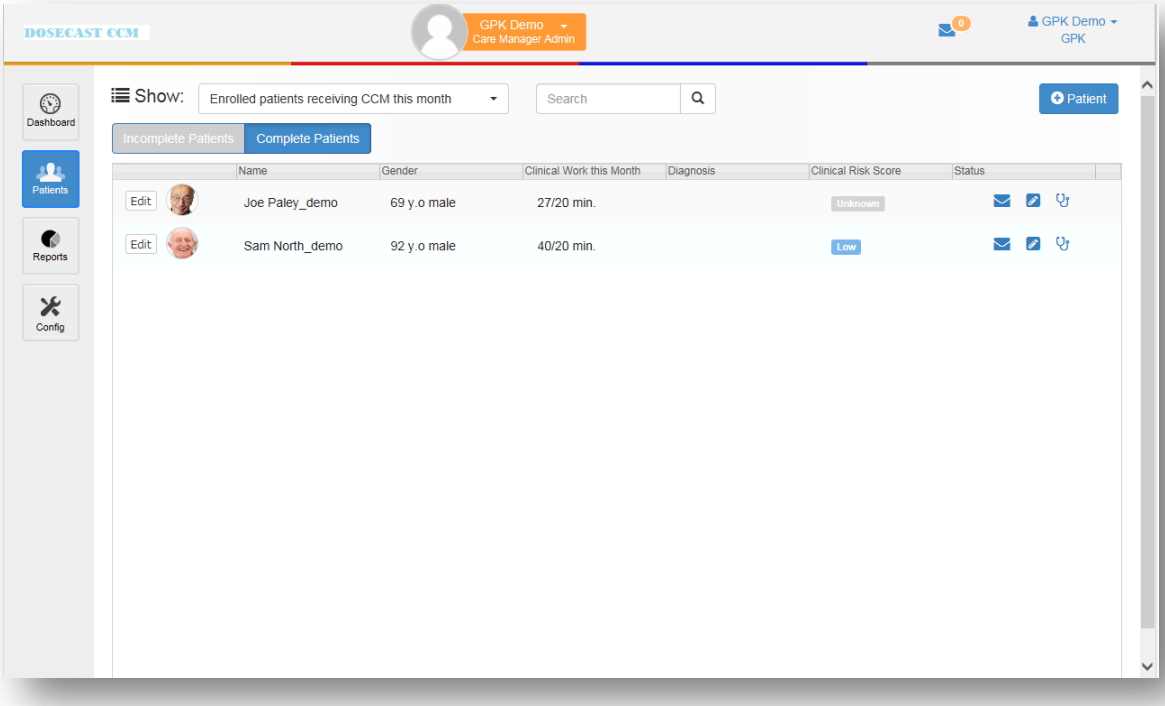
Patient Data Submission to CCM Portal (Source: Import from Practice EHR)



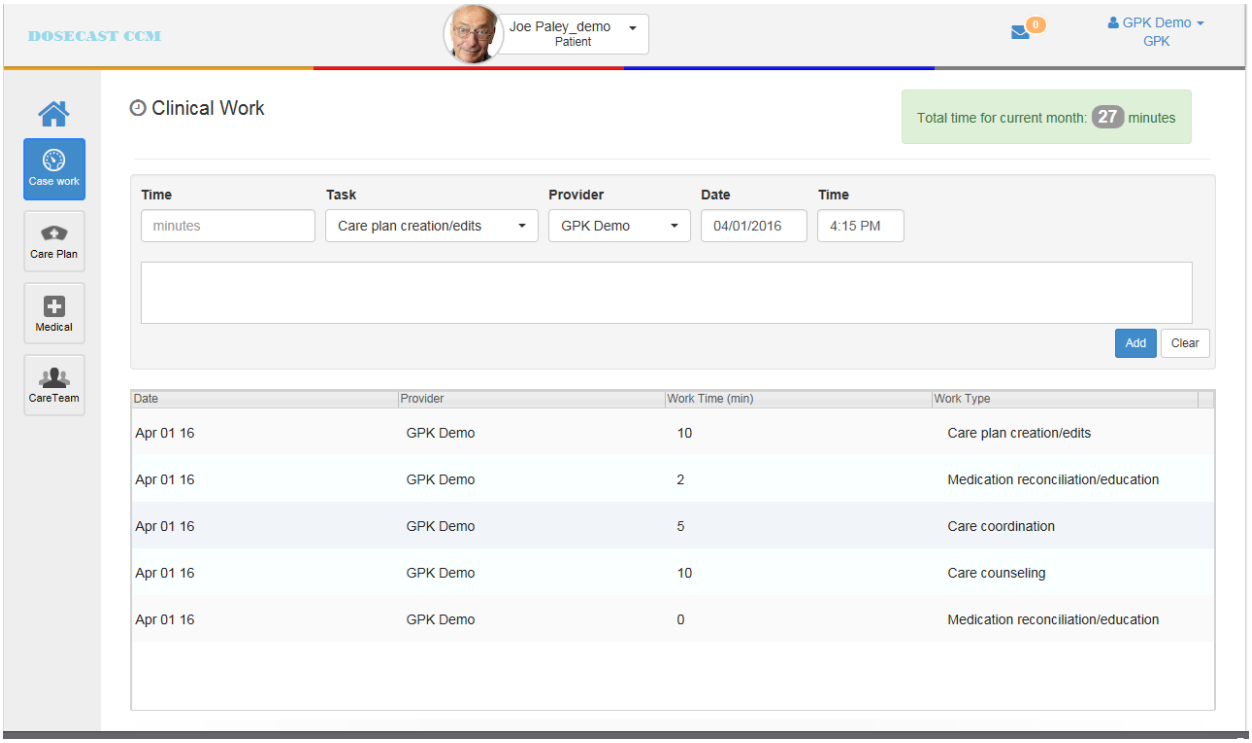
Onboard Practice Care team Coordinators



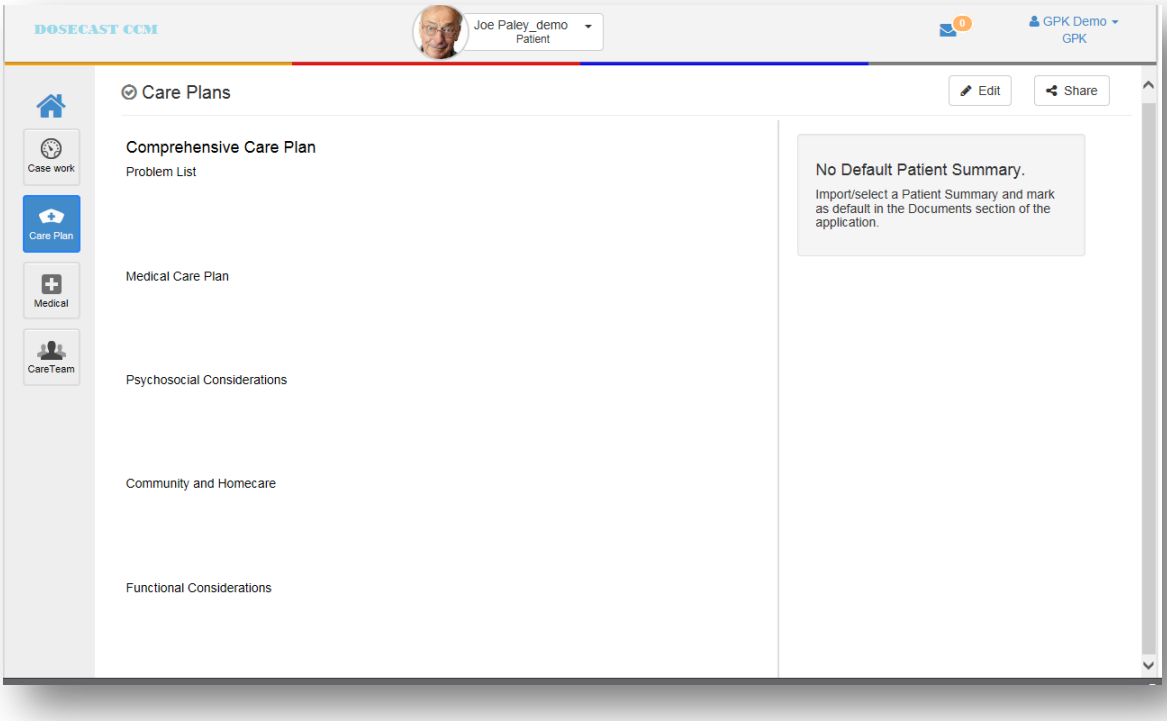
Patient Management



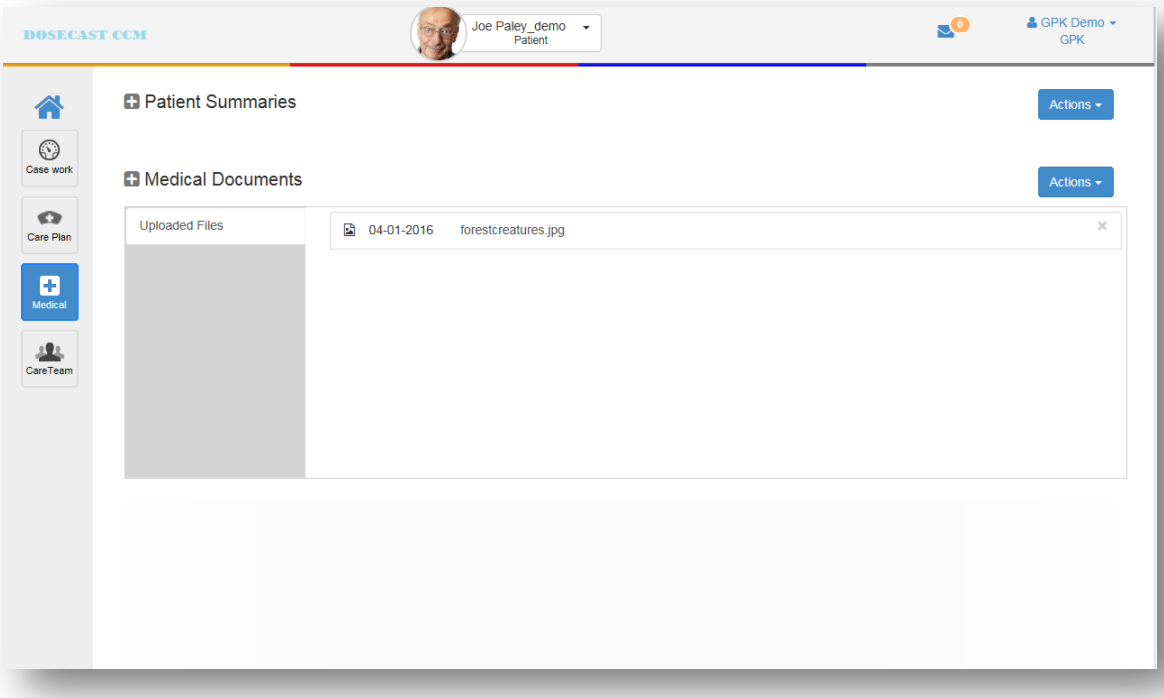
Patient Activity tracking (20 min non face-to-face tasks)

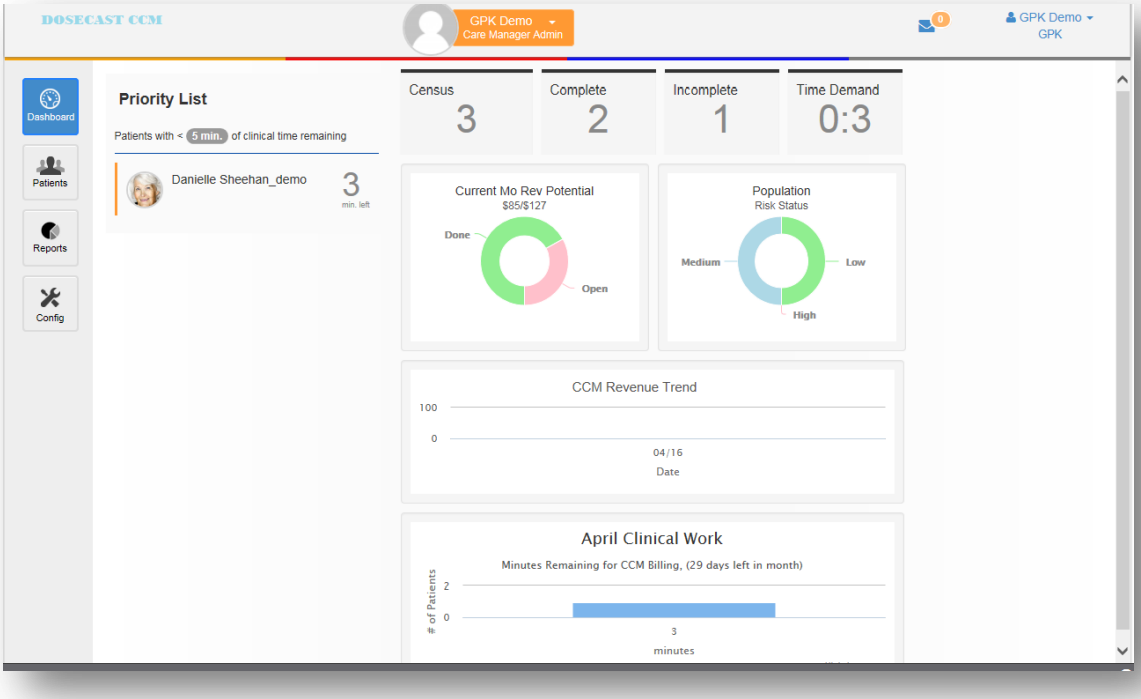


Care plan templates

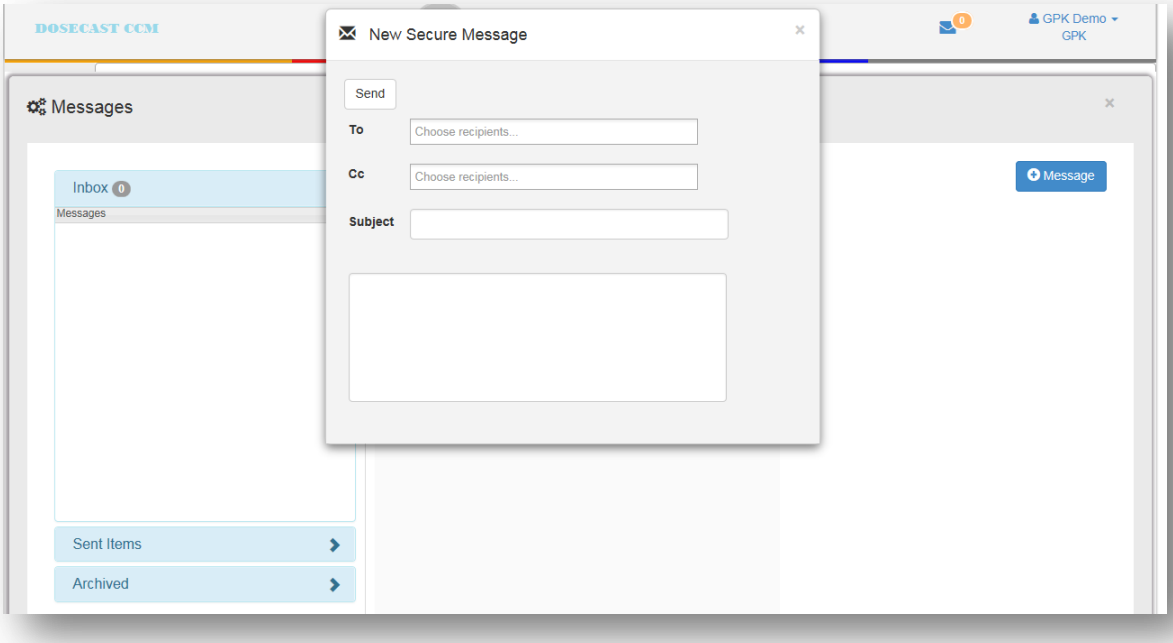


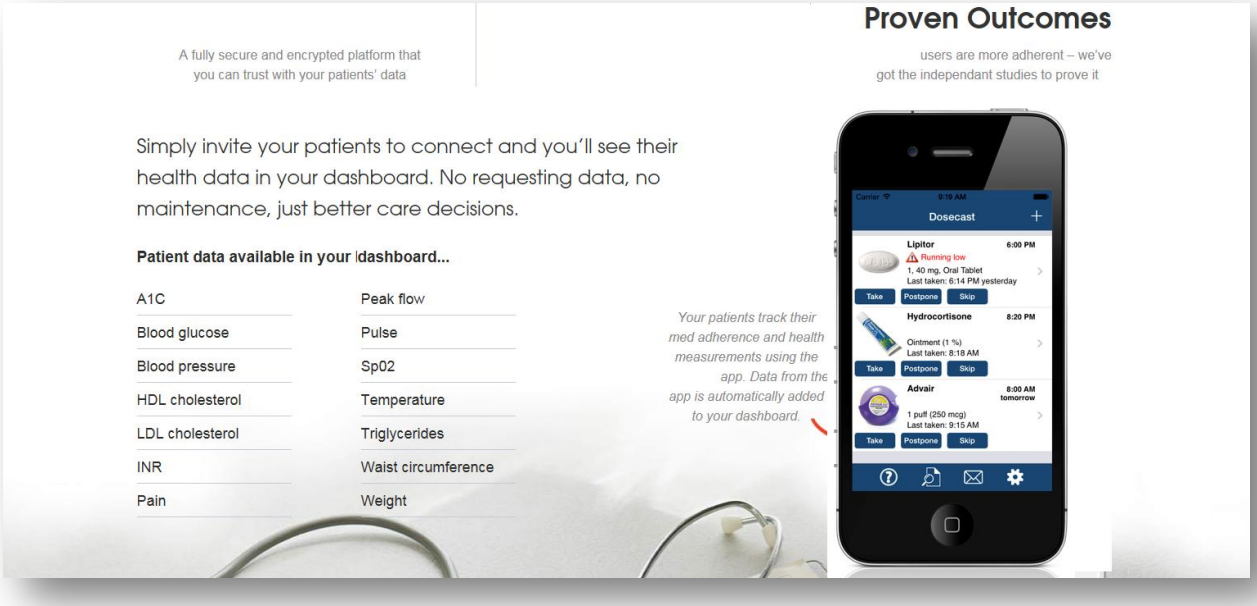
Consolidate Patient records and documents

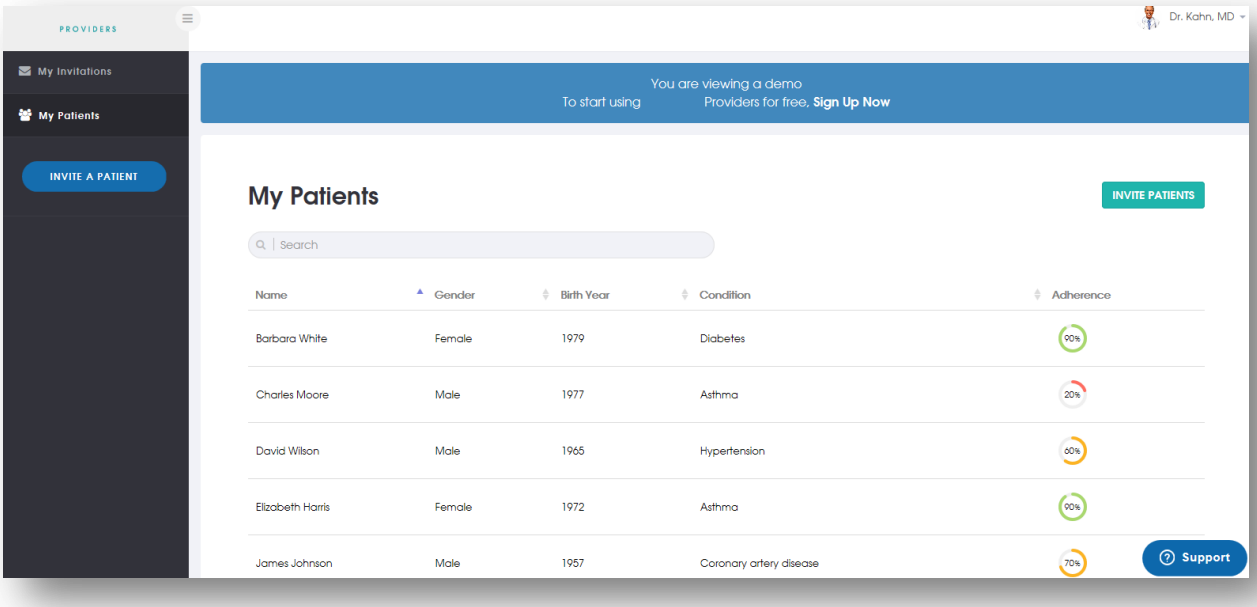


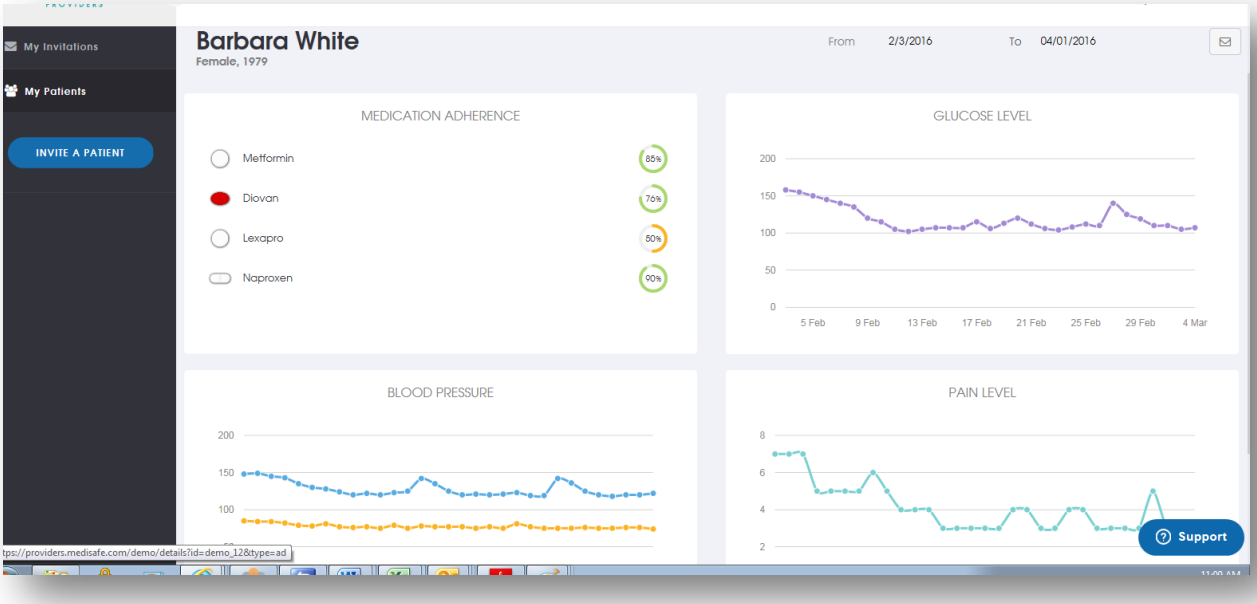


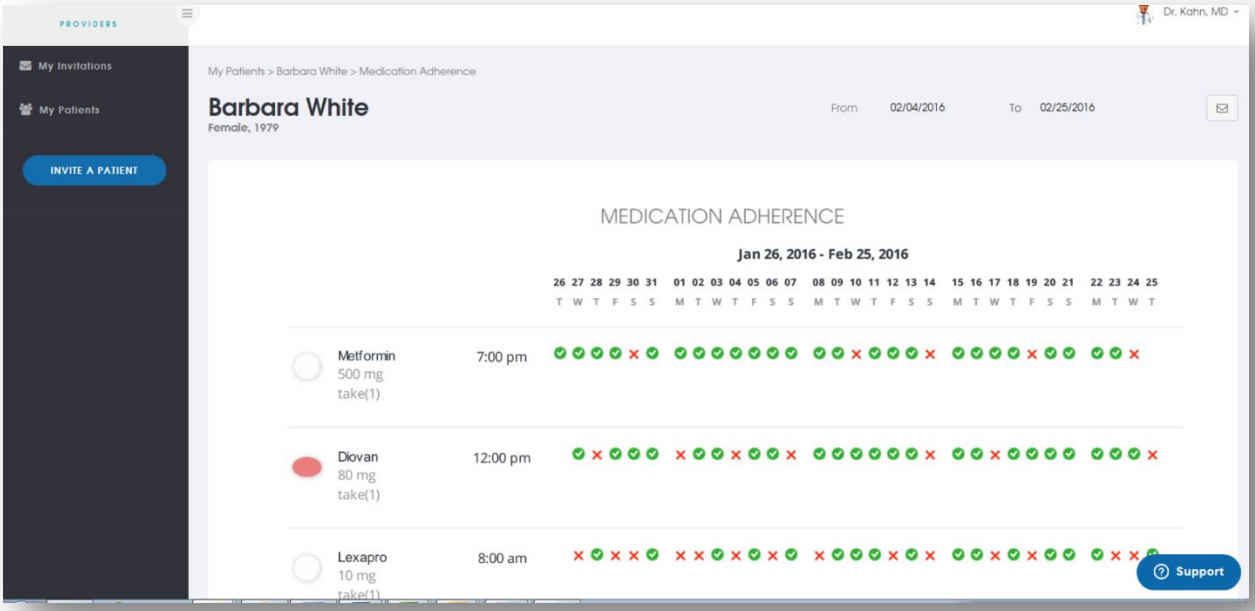
Secure Communications






PROVIDERS
Dr. Kahn, MD
My Invitations
My Patients
INVITE A PATIENT
You are viewing a demo
To start using Providers for free, Sign Up Now
My Patients
INVITE PATIENTS
Search
Name
Gender
Birth Year
Condition
Adherence
Barbara White
Female
1979
Diabetes
90%
Charles Moore
Male
1977
Asthma
20%
David Wilson
Male
1965
Hypertension
60%
Elizabeth Harris
Female
1972
Asthma
90%
James Johnson
Male
1957
Coronary artery disease
70%
Support


My Invitations
My Patients
INVITE A PATIENT
Barbara White
Female, 1979
From 2/3/2016
To 04/01/2016
MEDICATION ADHERENCE
Metformin
Diovan
Lexapro
Naproxen
GLUCOSE LEVEL
200
150
100
50
0
5 Feb
9 Feb
13 Feb
17 Feb
21 Feb
25 Feb
29 Feb
4 Mar
BLOOD PRESSURE
PAIN LEVEL
Support


PROVIDERS
Dr. Kahn, MD
My Invitations
My Patients
INVITE A PATIENT
My Patients > Barbara White > Medication Adherence
Barbara White
Female, 1979
From 02/04/2016
To 02/25/2016
MEDICATION ADHERENCE
Jan 26, 2016 - Feb 25, 2016
26 27 28 29 30 31 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
Metformin
500 mg
take(1)
7:00 pm
Diovan
80 mg
take(1)
12:00 pm
Lexapro
10 mg
take(1)
8:00 am
Support

Technical specifications:

Planned data Sources: EMRs

FHIR & HL7 Data Objects and Resources:

FHIR Resource List:

Medication:

- Medication
- MedicationOrder
- MedicationAdministration
- MedicationDispense
- MedicationStatement

Care Provision:

- CarePlan
- Goal
- ReferralRequest

Individuals:

- Patient
- Practitioner
- RelatedPerson

Workflows

- Encounter
- EpisodeOfCare

Scheduling:

- Appointment

Workflow #1:

- Order

Related HL7 Message Inbound/Outbound Types:

Ordering or enrolling patients for digital health services from within the EHR

- Outbound ADT
- Inbound ORM
- Outbound ORU

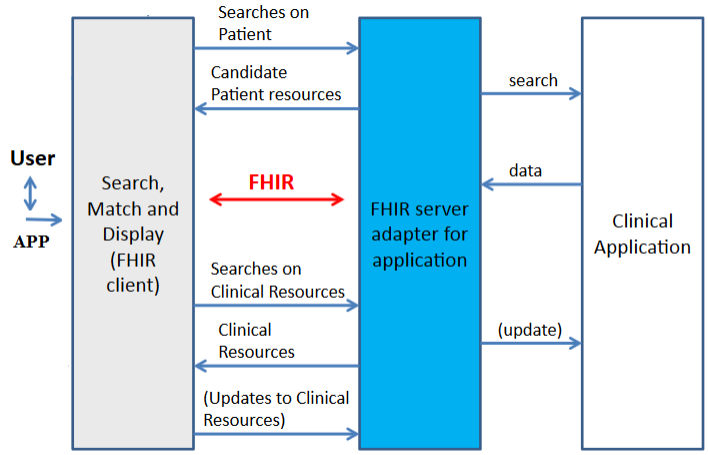
Encounter or note creation

- Outbound MDM
- EMPI

Push Notifications alerting a user

- Inbound ORU

Logical Architecture



Compliance with HIPAA regulations

- The Provider App environment will be hosted in a secure public cloud, multi-tenant service offering. The virtualized infrastructure is made up of web, application, and database servers that have been hardened and which can only be remotely accessed through the load balancers and bastion host. We would deploy a centralized logging solution in place to monitor activity and actions that occur within the environment. Segmentation will be implemented by Montuno through the use of load balancers and IPtables configured to restrict access to only approved ports and protocols. Strict logical access controls would be in place so that only authorized personnel are provisioned to access the internal management servers. Data is transmitted via an SSL encrypted session and a series of API calls are made to the database servers where ePHI resides. Montuno utilizes sophisticated logic to separate Individually Identifiable Information from the corresponding medical information. As a result of this mature security design, the risk of an unauthorized user gaining access to both data stores, while successfully linking the data, is mitigated.
- External users will make an API call over SSL to the load balancer, which forwards the request via SSL to the application servers. Depending on the types of data, the application server will make an API call to one of the database servers over an SSL connection. When a customer requests to retrieve their specific ePHI from the database server, the application server makes an API call to the database server over SSL to retrieve the data, which is then transmitted back

to the application server, load balancer, and ultimately the end user over an SSL encrypted connection. At no point in time, during transmission and storage, are the customers data unencrypted.

- Montuno would work with industry leading HIPAA compliance service partner Catalyze for market ready deployment and rollout to external facing customers.

Issue Analysis

There are two beneficial Provider Use Cases covered with the app:

Use Case 1: When Medicare announced in early 2015 it was adding the new CPT code 99490, it was a big win for chronic care management and telemedicine. 99490 was added specifically to provide better coverage for managing patients with multiple chronic conditions, a job that often requires a lot of "behind-the-scenes," unbillable time for healthcare providers.

Here are a few things to know about how Medicare CCM program works.

Medicare patients who have two or more chronic conditions qualify for the program.

Providers can bill the CCM CPT code 99490 once a month, for a non face-to-face service.
The procedure needs to take at least 20 minutes of clinical staff time per month.
That service can be a video interaction between the patient and doctor via secure Internet.
The following healthcare providers can bill the 99490 code:

- Physicians
- Certified Nurse Midwives
- Clinical Nurse Specialists
- Nurse Practitioners
- Physician Assistants

Only one provider can bill the 99490 per patient, per calendar month. The CCM program is available through traditional and Medicare advantage programs. The provider needs to have a certified EHR system. Providers need to get a patient's informed consent to initiate the CCM program. Here's what Provider needs to do to get Patient's consent:

- Tell them about the CCM program
- Get their written agreement to participate in the program, and permit electronic communication of their medical information
- Describe how the patient can stop the service
- Make sure to say that only one provider can bill for the CCM service per calendar month

The CCM scope of care includes a range of services, from simply recording patient's demographic information in your EHR, to creating a comprehensive care plan.

99490 can't be billed during the same service period as certain other codes.
Specifically, providers cannot bill 99490 at the same time as:

- 99495 – 99496 (transitional care management)
- G0181 – G0182 (home health and hospice care supervision)
- 90951 – 90970 (end-stage renal disease)

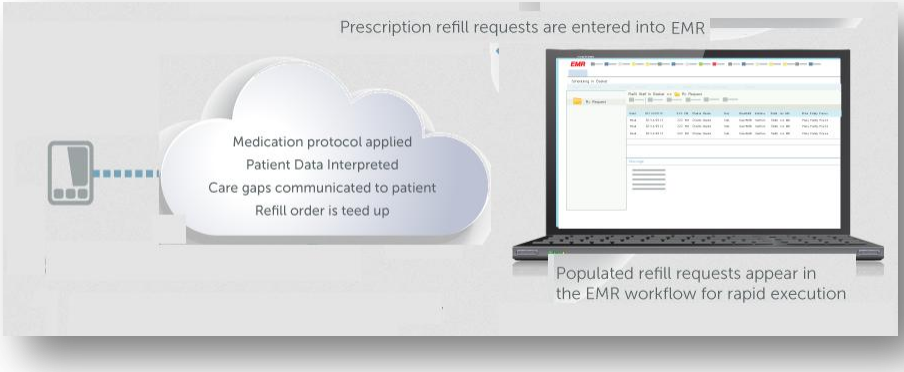
In initiating the Chronic Care Management Services program, CMS introduced CPT code 99490, which pays healthcare providers for care coordination services delivered to Medicare beneficiaries. The

program is designed to provide better long-term care to individuals while reducing overall spending. To participate, healthcare organizations must:

- Provide patients with at least 20 minutes of non-face-to-face clinical staff time per month
- Offer 24x7 access to clinical staff for urgent care needs
- Establish a comprehensive care plan that addresses ongoing care management for all chronic conditions
- Implement certified electronic health record (EHR) technology
- Service the patient's medication reconciliation and manage care transitions
- Provide secure access for all relevant caregivers to communicate about the patient's care

Use Case 2: Intelligent workflow automation of prescription refill orders with FHIR EMR workflow integration would assist PCP's and Providers in automating mundane tasks. Primary Care and Specialist Physicians are pressed for time in a given day and increasingly taken away from spending quality time in interacting with Patients due to other equally important review, follow up and administrative tasks.

Montuno medication app would collect the refill information, patient reported observations and other disease specific protocol data, and in a non disruptive way, add that information into the EMR for care team members and others to review and take action for the prescription refill. This would automate the workflow between Patient, Pharmacist and Physician and improve outcomes. Physicians have estimated in studies related to this topic that this type workflow automation provides on average of about 30 minutes of time savings per day.

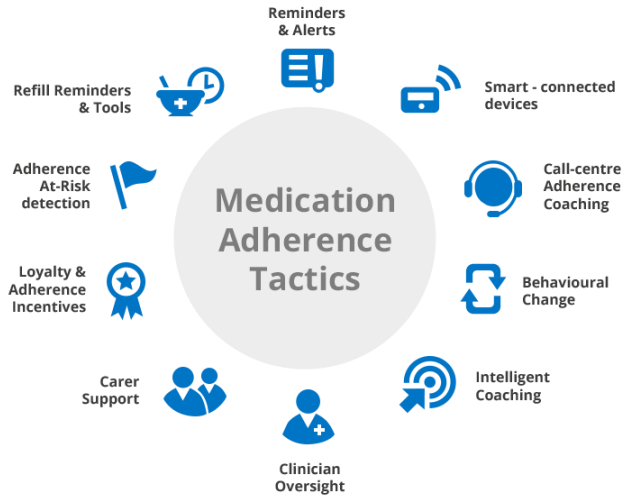


Solution description

The solution consists of five core components:

1. Medication reconciliation and Adherence Management
2. Patient care plan creation and reviewing its adherence
3. FHIR EMR Integration for reading Patient's medication, Care plan and other related resources and write back data non-intrusively into the EMR on CPT 99490 and Prescription refills.
4. Dashboard views and recording of clinical time for payer reimbursement
5. Bi-Directional Visual IVR Telemedicine platform for patient engagement

Medication Adherence: This is the primary functionality of the existing Montuno mobile medication app. The App has a robust Cloud enabled middleware. As part of this Provider App challenge, Montuno team would incorporate FHIR-EMR RESTful API integration. This new integration capability would assist Provider to prescribe the app to their chronic care patients and other patients who are on multiple medications to streamline medication reminders and the refill workflow process.



Chronic Care Management - Care Plan Integration

The system can identify appropriate patients within a practice and assist in the process of patient enrollment as per the consent guideline policy of the CMS CPT 99490. By processing uploaded practice management system reports or reading via FHIR EMR care plan resources, CCM compliant patients are identified. Patient accounts are then created and enrollment of these patients performed in the CCM program.

CARE PLAN BUILDER: The system can import a standard CCDA clinical summary as the basis for the medical care plan. This information is used to create a comprehensive, patient centric care plan. Each care plan is comprised of a set of modular blocks that are mapped to a set of patient facing care tasks.

The system can offer appropriate care tasks based on patient risk and chronic conditions. Administrators and users can customize and share the modular care plan sets between them.

CARE TASK COORDINATION: Each care team member has role-based access to the system and can adjust the care plan and tasks as is appropriate. Thus the care tasks timeline is a synchronized calendar of events that foster tight coordination of resources and effort. In addition, all care managers have access to a care notes system that tracks system events and care coach notes.

Give Patients a Role in their Care

Communicate

- Send and receive secure messages with care team.

Collaborate

- Stay in sync with simple to-do's and reminders.

Health Trends

- Beautifully visualize days, weeks, and months of data and quickly identify trends.

Medication Management

- Guide dosage and scheduling for complex medication therapies.

Track

- Track & share health data with the care team.

Share

- Invite family and caregivers to collaborate on care.

Notifications

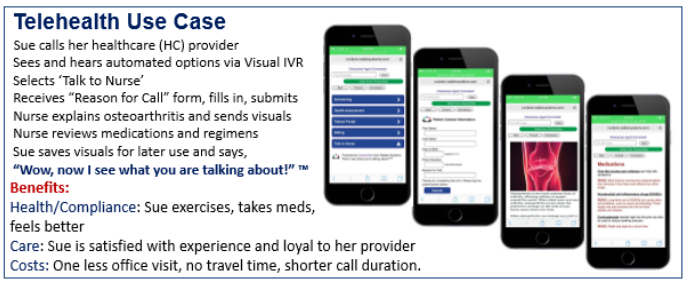
- Automatic reminders and alerts sent to the phone, desktop, & email.

Tailored Education

- Deliver rich and engaging content that adapts for any screen.

Bi-Directional Visual IVR Telemedicine platform for patient engagement

Montuno team has a partnership relationship with Radish Systems LLC. Radish has developed a disruptive, patented smart phone bi-directional technology where a Provider's office can push images and other health information while speaking to the Patient remotely in compliance with HIPAA policy. Montuno is working with Radish collaboratively and is looking forward to incorporate this technology into our Mobile FHIR-EMR app.



Financial Estimates

The mobile App with FHIR integration would have the potential for Providers to earn revenues from two ways.

The Math of CMS CPT 99490:

Per Patient Per Month (PPPM)
• $42~ – including co-pay ($8) and subject to deductible
• 20 minutes – clinical staff time under general supervision (certified MA, LPN, RN or higher)

Provider Revenue per Year
- Approximately $380 to $480 per patient/per year (PPPY) – (CMS Payer)

How many Medicare patients per billing provider?
- Medicare FFS (for now), pretty sick ~200, of those ~150 potentially will consent for Care Management
- Potential Revenue – 12months*$42/PP/Mo*150 Patients = $75,000~

Provider Clinical Staff Expenses per Year
• 150 patients @20minutes/month = 50 hours of CCM per month
• Part-time Clinical Staff Payroll expense ~ $25K annually

Realistic Net Revenue per Provider
• Between $45K and $60K per billing provider per year

Second Revenue Source – Refill workflow process optimization:

Accountable care organizations (ACOs) will increasingly be reimbursed for achieving clinical and financial benchmarks. Accordingly, refining processes in order to improve quality and reduce costs is key. An important factor in meeting these benchmarks is an ACO's ability to optimize medication use. Intelligent workflow automation of prescription refill orders with FHIR EMR workflow integration would enhance and provide actionable time savings. Physicians have estimated in similar studies that this type pf service provides between 20 and 30 minutes of time savings per day. Assuming an annual PCP salary of around $200,000, 20 to 30 minutes per day would amount to $33 to $50 saved per day per physician. The savings is even higher when time savings from other clinical staff is included.

Revenue Model:
Montuno would charge either per Patient in a SaaS hosted model or as an enterprise Software license structure. The cost per patient could be in the range of $3-$5 per Patient with some upfront integration fees.

Licensing: At a high level, App platform would be licensed on an annual basis, with pricing proportional to the size of facility and number of patients served or simply licensed by site.

Use of Funds:

- Firm up Product Functional Design
- Complete Software Development & FHIR-EMR Integration
- Pilot Testing and Initial rollout

Revenues:

Type	Month 6	Month	Month 8	Month 9	Month 10	Month 11	Month 12	Totals
SAAS Per Patient	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00	
SAAS Patient count	5000.00	5750.00	6612.50	7604.38	8745.03	10056.79	11565.30	
SAAS Revenues	$ 25,000.00	$ 28,750.00	$ 33,062.50	$ 38,021.88	$ 43,725.16	$ 50,283.93	$ 57,826.52	$ 276,669.98
Enterprise Licensing Sale	$ 75,000.00		$ 75,000.00		$ 75,000.00		$ 75,000.00	$ 300,000.00
							Annual Revenues	$ 576,669.98

Use of Funds:

- Firm up Product Functional Design
- Complete Software Development & FHIR-EMR Integration
- Pilot Testing and Initial rollout

Engagement plan

Engagement Plan

Co-Design (Stay in Sync)

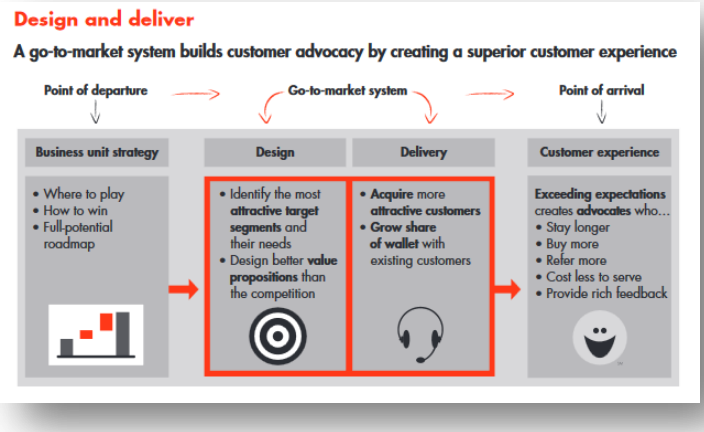
We are in touch with two large Physician Practice group in the Washington DC area. They use Practice Fusion EMR. We have also reached to other Provider practices as well to co-design and test the pilot jointly on other leading EMR systems and would follow up elsewhere using our network of contacts.

We also plan to partner with a leading ACO such as Aledade in Bethesda to get their support. We would work with their functional analysts in co-designing the workflow and potentially pilot the app to a small subset of their 100,000 Medicare Beneficiary population and the Physician practice customers.

Our targeted customer base would be ACO's, Physician Practices dealing with Medicare and also Commercial Payers and Health Care networks looking to improve Chronic Disease Management and optimize medication adherence and Rx refill workflow optimization.

Adaptive Go to Market Strategy:

- Partnership with ACOs
- Partnership with Provider Networks
- Partnership with Technology and Software Partners and Vendors
- Alliances with Medicare Practice Management Software Vendors
- OEM Relationships as a White Label App
- Participate in the upcoming ACO and other Health Conferences
- Work with Consultants who have existing Provider network relationships
- Gradually recruit Part-time and full time Sales staff
- Fine tune and evolve the Strategy



Source Bain & Co

Marketing

We plan to conduct multiple Webinars through industry partners. We will develop Marketing collateral that showcases the uniqueness of our multi-dimensional solution that holistically integrates care plan, medication adherence, FHIR –EMR standardized integration and innovative patient engagement to bring stickiness to both the Provider and Patients.

Integrated product road map ideas, sources and potential partners:

Montuno Software LLC
Care Cliques
Catalyze.IO
Radish Systems LLC
Medisafe
Caradigm
HealthFinch
BizMedToolbox
Aledade
Patient IO