Digital Platform Format

Specification capabilities of the digital platform hosting the Home-based health care system: Front End

The plat form will need to have 3 main interfaces or front ends backed by a electronic medical recording database backing it and also an evolving decision algorithm that will be developed in phased approach.

The process flowchart bellow describes the very basics of interaction between the different pieces of the puzzle that need to work together to affect a continuous seems less service.

Fig 1: Plat form flow chart
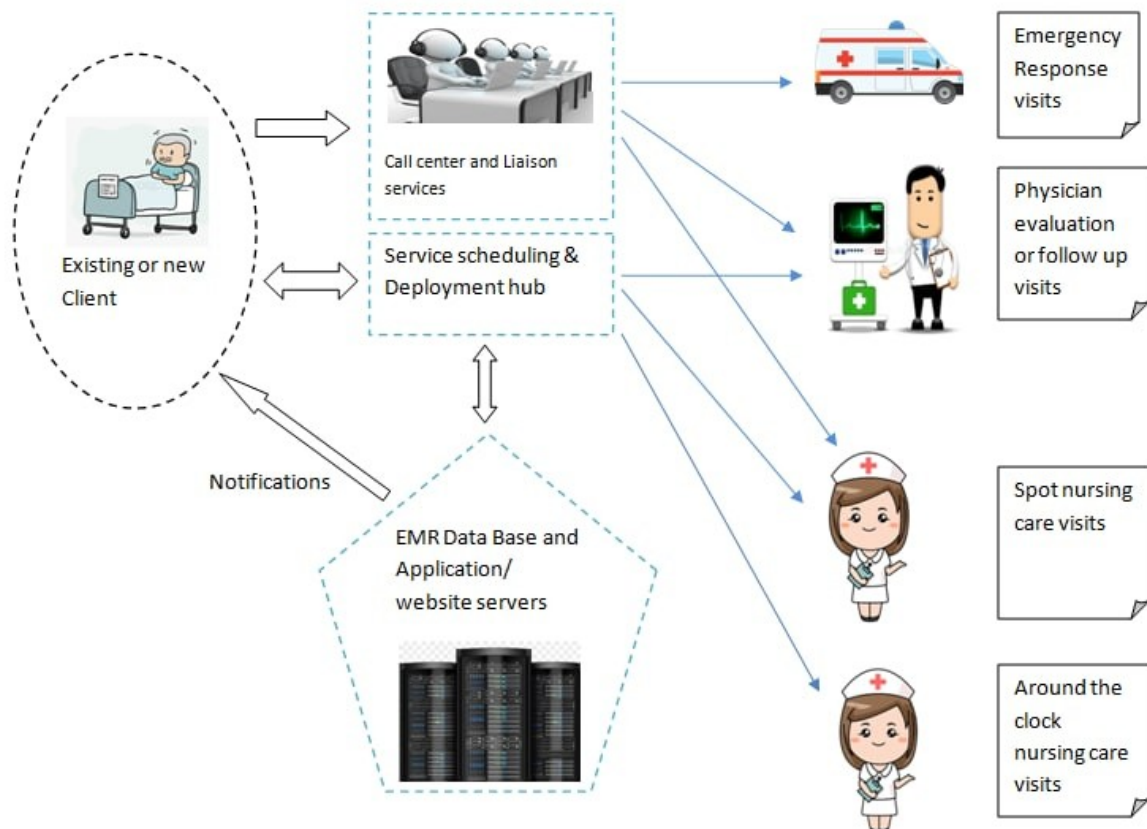
The Front end

The three parts that are used to interact with the data base will be:

- Client interface
- Care provider interface
- Health care administrator interface

Client interface

The client interface will be the access point for the health care consumer which will be primarily experienced through an android or IOS application. This interface needs to also be used to some limited capabilities through our website that will be able to reach out for service.

The client interface shall be capable of but not limited to the following tasks for new customers:

- Input of basic Socio-demographic data by the client
- Input basic health information by the client in a yes or no format
- Allow client to browse the different forms of service that are provided
- Allow client to submit for an appointment or a specific service
- Allow client to easily accesses the emergency call centre and the scheduling and deployment hub

Once the patient has signed up to the application and basic information is put in and the patient had been visited by one of the health care providers, a treatment plan is designed. The client interface needs to be able to provide the curated health information that is now enriched after the health care providers input with the put forth treatment plan. So the client interface with an existing client needs to be able to:

- Provide readily accessible medical records and health statues to the client as put forth by the health care provider
- Provide the treatment plan that has been designed for the patient
- Provide health promotion advices and customized healthy living tips
- Provide a follow-up schedules and notifications of the upcoming visits before hand

Health care provider

The interface for the health care professionals is amid at providing easy way to perform one paramount task i.e patient medical recording. In this aspect there is a give and take in regards of ease of use, quality assurance and standardization of care.

Therefore, in that regard the frame for this interface needs to Qazi- structured, meaning the part of the interface where History of current illness is documented could be in a free hand format however physical findings need to structured and more over the final assessment need to be able to be through the standardized ICD-10 diseases classification code.
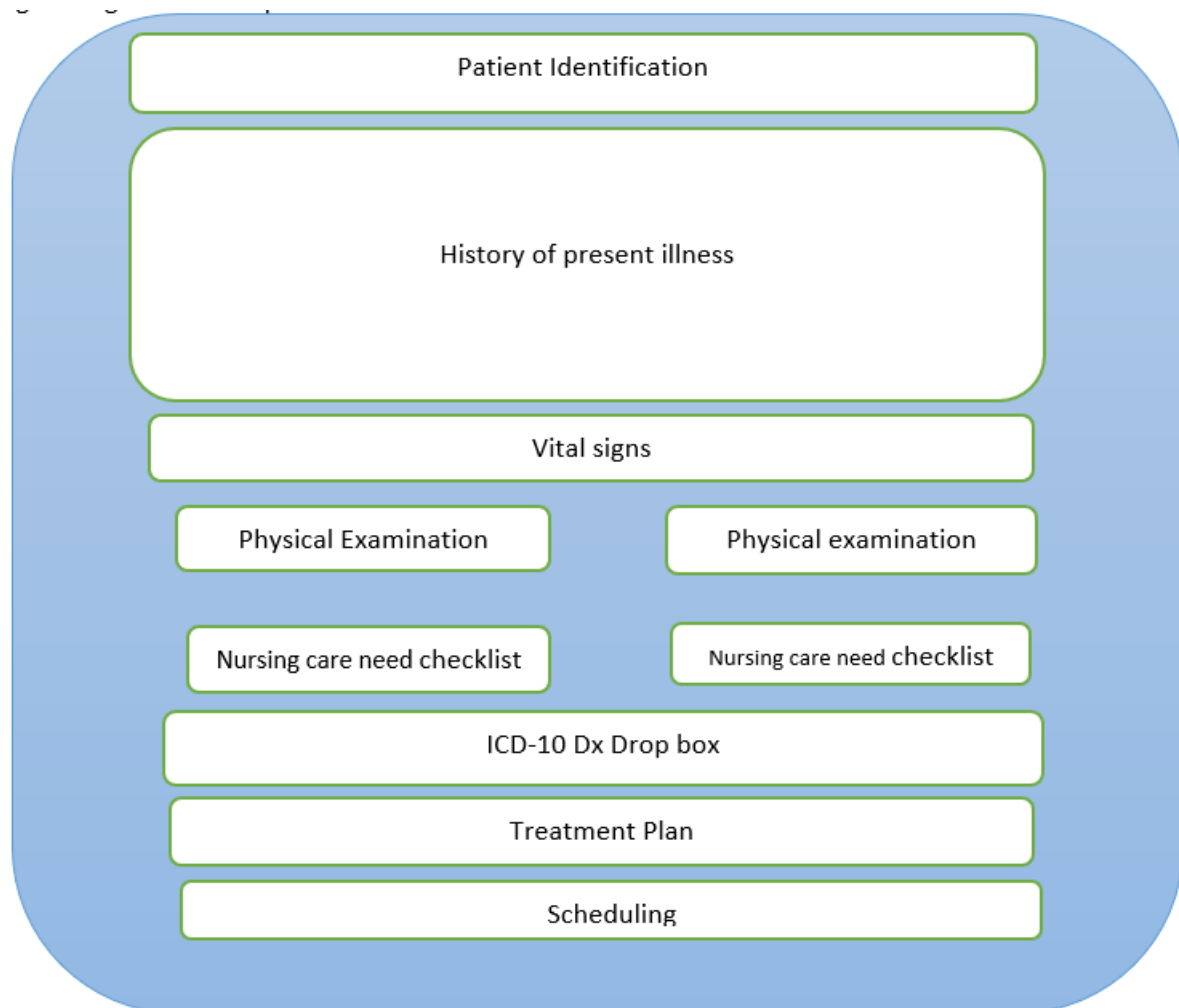
There also needs to be a capability for a more structured nursing care need evaluation assessment which will be completely structured in a check box format.

The treatment plan then can also follow a mixed way about getting the fix across; where the pharmacologic parts need to structured, the health promotion more free hand and the scheduling structured.

The plat form can also have a decision aid that will start out by no more than 10 algorithms' that are aimed at not missing major life-threatening diagnosis and also providing a structure follow up and evaluation scheme for predictable services such as ANC.

An additional second page might be scripted in to full fill needs for additional noted directions and consultation requests.

Fig2: Diagrammatic mock representation of the HCP interface

Patient Identification
History of present illness
Vital signs

Physical Examination	Physical examination
Nursing care need checklist	Nursing care need checklist

ICD-10 Dx Drop box
Treatment Plan
Scheduling

Fig 3: Sample format of an intake nursing checklist

INOVA HOME CARE   **NURSING VISIT RECORD**   Patient Name_____

HOMEBOUND   ☐ Yes (Patient is homebound)   ☐ N/A
Patient is   ☐ Bedbound   ☐ Wheelchair bound   ☐ Chairbound   ☐ Non-Ambulatory
☒ Patient has unsteady gait & requires assistance of another person to ambulate
Patient is ☐ NWB ☐ PWB & requires the assistance of _____ to ambulate
Patient is unable to negotiate stairs due to _____
Patient has ☐ Weakness ☐ SOB with ambulation of _____ feet
☐ Patient has severe disabling pain in _____
☐ Temporarily ordered homebound due to _____
☐ Other _____

VITAL SIGNS Temp_____ ☐ Oral ☐ Rectal ☐ Axillary
Resp Rate_____ Labored ☐ Yes ☐ No
Apical Pulse_____ ☐ Regular ☐ Irregular
Radial Pulse_____ ☐ Regular ☐ Irregular
B/P ☐ Sitting_____ ☐ Standing_____ ☐ Lying_____
Wt_____ ☐ N/A
Wt ☐ Gain ☐ Loss since last visit_____ ☐ N/A
MD /HOSPITAL VISIT SINCE LAST NURSING VISIT ☐ Yes ☐ No
Date_____ Reason_____

NEUROLOGICAL/SENSORY
☐ Hearing Impaired ☐ Speech Impaired ☐ Oriented to person/place/time
☐ Confused ☐ Agitated ☐ Visually Impaired
☐ Hx Seizures ☐ Other _____ ☐ Lethargic ☐ Tremors ☐ No deficit
Circle PAIN level   0   1   2   3   4   5   6   7   8   9   10
    no pain   med pain   worse pain
Location/quality/freq/duration _____
Comment/Pain control _____

RESPIRATORY
☐ Crackles_____ ☐ Lungs Clear bilaterally
☐ Rhonchi_____ ☐ ↓ Breath Sounds_____
☐ Wheezes_____ ☐ Cough_____
☐ Orthopnea_____ ☐ Dyspnea_____
☐ O2 Sat_____ ☐ Other_____
☐ No Deficit ☐ O2 at _____ L.min per _____
Comments _____

CARDIOVASCULAR
☐ Chest pain_____
☐ Murmur_____
☐ Dizziness_____
☐ Edema_____
☐ Neck vein distention_____
☐ Pacemaker_____
☐ Other_____
☐ No Deficit
Comments _____
☐ No deficit

ENDOCRINE
☐ Hx Diabetes
☐ √ BS this visit
☐ No S/S ↑↓ bl sugar
☐ Assess BS Log

MUSCULOSKELETAL
☐ Gait unsteady
☐ Poor balance
☐ Weakness
☐ Limited ROM
☐ Other _____
☐ No Deficit
Comments _____

MEDICATIONS
☐ No New (N)/Changed (C) medications since last nursing visit
☐ N/C medication (dose, frequency, route)   *(Update Medication Profile)*
_____
_____
_____
Response to N/C medications _____
Side Effects N/C medications _____

GASTROINTESTINAL/NUTRITION/HYDRATION
☐ Bowel Sounds Present   Diet _____
☐ N/V   Appetite ☐ Good ☐ Fair ☐ Poor
☐ Diarrhea ☐ Constipation   Fluid ☐ Good ☐ Fair ☐ Poor
Last BM_____   Skin Turgor ☐ Good ☐ Fair ☐ Poor
☐ NPO   Eyes Sunken ☐ Yes ☐ No
☐ Tube Feeding/Type/Amount   Mucous Membranes
   ☐ Moist ☐ Tacky ☐ Dry
☐ Ostomy_____   ☐ Other _____
☐ Comments_____   ☐ No GI/Nutrition/Hydration Deficit

URINARY   (Circle) Foley/Suprapubic
☐ Incontinent_____   Draining ☐ Yes ☐ No
☐ Distention_____   Urine QS ☐ Yes ☐ No
☐ Burning _____   Urine ☐ Clear
☐ Frequency_____   ☐ Cloudy ☐ Amber
☐ Other _____   ☐ Yellow ☐ Hematuria
☐ No GU Deficit   Comments _____

SKIN/WOUNDS
☐ Warm and dry
☐ No Deficit
☐ Cool/Clammy
☐ Flushed
☐ Jaundiced
☐ Rash (describe)
☐ Other (describe)

Wound (Measure once a week)
Location _____
L _____ W _____ D _____
Appearance of base _____
☐ Tunneling/Undermining
_____
Drainage ☐ Yes ☐ No
Color/Amount _____
Odor _____
Surrounding skin _____
Comments _____

Wound (Measure once a week)
Location _____
L _____ W _____ D _____
Appearance of base _____
☐ Tunneling/Undermining
_____
Drainage ☐ Yes ☐ No
Color/Amount _____
Odor _____
Surrounding skin _____

HHA SUPERVISION AND SAFETY
☐ Patient/Caregiver satisfied with care and rapport is good
☐ LPN is following plan of treatment as ordered
☐ SN/Aide services will be increased to _____
☐ Aide service still needed
☐ LPN services still needed for skilled assessment
☐ Aide is providing care per 485 #21

Signature and Title _____   Time In _____   Time Out _____   Date _____

The Health care Admin Interface

This page will primarily be used by the service scheduling and deployment hub team members to see the number of individuals in the service the upcoming need for care in the coming day, weeks or month and thus scheduling the appropriate human and material resources are in play to stratify this.

This can be achieved on the skeleton of a generic EMR system with hospital management capabilities.

The system among other things needs to have

- A finance tracking and payment system
- Human resource scheduling platform
- Patient Calendar and appointment book platform
- Consumable resource tracking and notification system