


Covid19AcuteMx Support Tool

A tool to rapidly guide the non-intensivist or inexperienced frontline healthcare provider thru the acute clinical management of a Covid19 patient

We responded to :

Setup and management of the EOSC Secretariat supporting the EOSC Governance


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Setup and management of the EOSC Secretariat supporting the EOSC Governance

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Projects & Activities Requests Criteria

EOSCsecretariat.eu retains a high degree of flexibility in its roll-out plan by adopting a co-creation approach and providing budget for all upcoming, foreseen and unforeseen, activities and actions related to the work of the EOSC Secretariat to support the EOSC Governance.

The project adopts an optimal implementation in terms of coordinating approach, line-up of partners and allocation of budget for co-creation. It is also characterised by being neutral towards the community it is serving and by having a pragmatic approach that is fully dedicated to realising the outcomes of the EOSC design.

To apply for co-creation activities, please fill in this [Request Form for Co-creation Activities](#).

EU COVID-19 Fast Track Funding

- The European Open Science Cloud (EOSC) is governed by three constituent bodies, as defined by the European Commission Staff Working Document Implementation Roadmap for the European Open Science Cloud
- https://ec.europa.eu/research/openscience/pdf/swd_2018_83_f1_staff_working_paper_en.pdf

So what is this?

A Frontline Healthcare Provider:

- Decision support tool
- Acute care clinical Management (Mx) guide
- Educational resource
- Reference information
- Disease and treatment alerts

Covid19- Rapidly changing landscape of

- the nature of this condition
- its acute care management

coupled by

- **Frontline Healthcare Workforce
Surge Needs**

Workforce surge needs

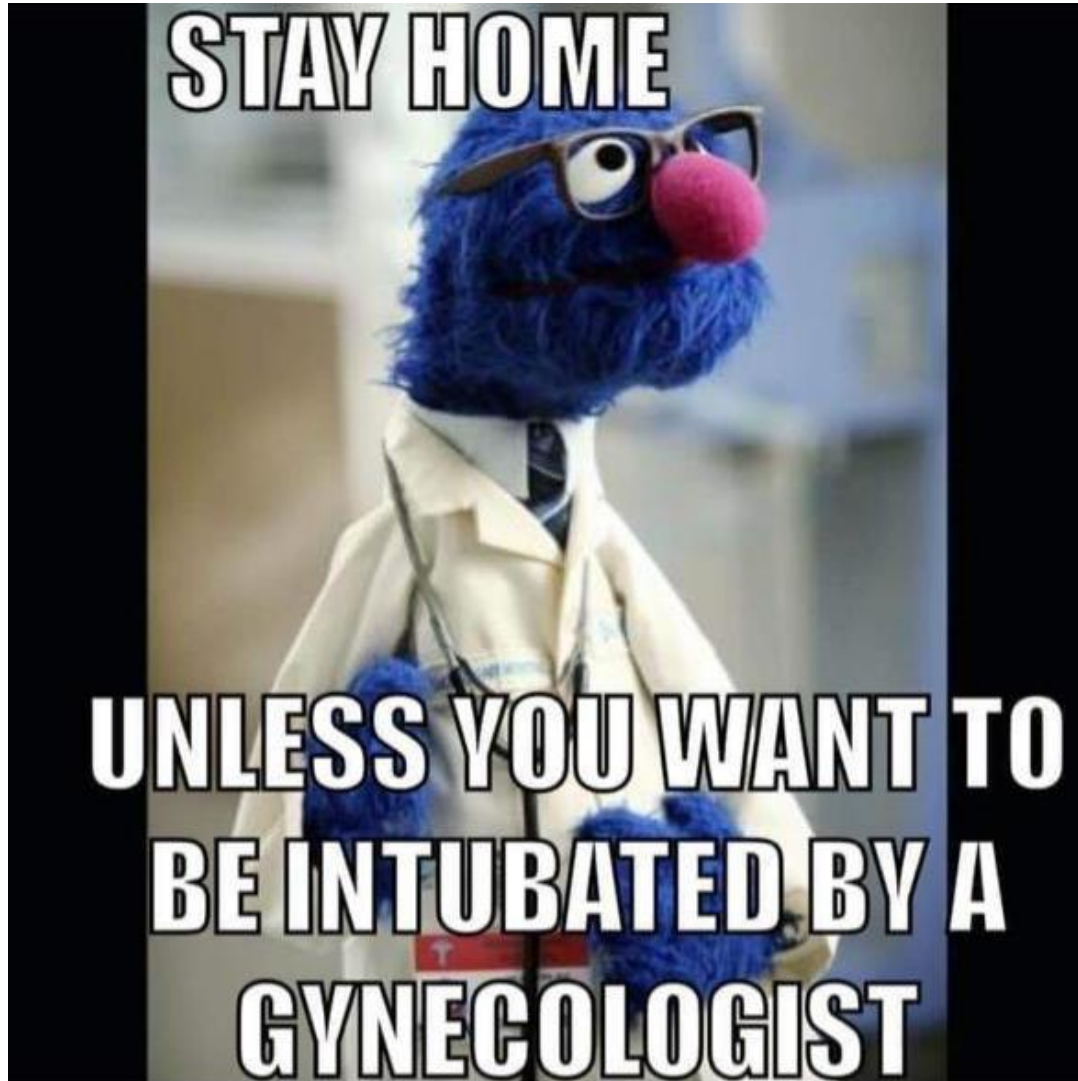
- Determinants
 - increased volume of acute and critical patients
 - attrition of skilled providers due to falling ill or isolation requirements
- Increased demand for:
 - Emergency Medicine physicians and nurses
 - Critical Care physicians and nurses

Workforce surge solutions

- Cross skilling:
 - Surgical and other residents to be trained to manage critical care patients
 - Non critical care nursing staff expanding into critical care areas
- Up skilling:
 - Early deployment of medical and nursing students
- Updating:
 - of retired skilled staff.

.... and FAST

Cross skilling and Up skilling



The **PROBLEM** that we solve

- Front-line providers around the world are
 - faced with a flood of constantly changing information about this new disease and its treatment
 - challenged with recruitment of healthcare providers who require cross-skilling, upskilling and updating (ie. Plastic Surgeon, Medical Student, Nurse Practitioner, or retired providers).
- This is an unprecedented situation in frontline health care
 - extremely difficult for the highly experienced clinician
 - almost impossible for a junior, or cross skilled provider to keep up with all of this, 100's of emails, new scientific articles and papers daily, frequently changing policies and protocols.

A Pressing Need

- Need for a 'readers digest' overview
- With a simple clear easy to use and searchable resource based on world's best and current information
- To have access to one stable and simple tool – that is continually updated –
- But such a resource just isn't there
- Our Covid19AcuteMx Support Tool addresses this problem

The SOLUTION

"The Covid19AcuteMx Support Tool"

- Designed to assist frontline healthcare providers understand the scope of this disease and the spectrum of treatment for patients they are caring for
- An adjunct to an institution's protocols
- A free access, real-time, continually updated in-your-hand tool and designed to integrate end user input and feedback to enhance its development

The PRODUCT goals

- To collect optimal current evidenced based information, and relevant educational resources
- To distill and compile them into one simple to navigate multiplatform for Mobile Web and scope for Android and iOS
- To continually update this from key global resources
- Focus is on user-orientation and inclusiveness across borders and disciplines, with a lean minimalist governance, enhancing and advancing the product in a co-creation manner

"The Covid19AcuteMx Support Tool"

- Decision support tool
- Acute clinical care management guide
- Educational resource
- Reference information
- Disease and treatment alerts

An interactive ready resource in the palm of a healthcare provider's hand

- Focusing on end-user experience and interactive relationships.
- An active, social process, based on collaboration between developers and users.
- A simple, clear interface that is designed like a pyramid, with the clear basic essential info at the top outlined on hand, and the ability to drill down into the details and supporting information where possible.

Outline of Covid19AcuteMx Support Tool

- Identifying of the possible Covid 19 Patient
- Classification into Mild, Moderate or Severe
- Precautions, Monitoring, Diagnostics (Labs/Imaging)
- Basic treatment paths
- Instructional videos on:
 - airway management, ventilation, pronation
- Updatable reference material

The Team

- Multidisciplinary and international, a total >100 years of experience
- Project Team and the Medical, Technology and Product Development Advisory Panel
- Technical and healthcare applied expertise across the spectrum of:
 - Intensive/Critical Care, Emergency Medicine – Medical and Nursing
 - Health, Ethics and Legal aspects
 - Technical Project management
 - Mobile Web and Digital Health App design and user interface (UX) product development
 - End users including non-specialist clinicians and a medical student, are all included as the

The Team



- **Ori Avihail– Project Manager, Tech**
 - Project Manager/SW development expert/Maker
 - SQA and Innovation in IAI
 - Lecturing about SW and makers subject
 - Education: MBA, MSC , BA



- **Nadine Levick**
 - Emergency Physician/Interdisciplinary Researcher
 - Emergency Medicine, Primary Care, Public Health
 - Emergency Department, Assuta Ashdod
 - CEO, Founder, EMS Safety Foundation
 - MD (MBBS), MPH, FACEM, FRACGP



- **Ronya Rubenstein**
 - R & D Management
 - Medical Devices, Digital Health, Patent Law, and Intellectual Property
 - LLM, LLB



- **Sarit Shahroor-Karni**
 - Director, Pediatric ICU
 - Shaare Zedek Hospital
 - MD



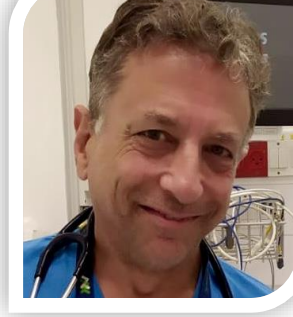
- **Professor (Rachel) Yaffa Zisk Rony**
 - Hebrew University School of Nursing
 - Prof. Clinician, Ethics & Legal in Research, Nurse, Researcher
 - Education: PhD, RN, MPH, MSN, FNP-BC



- **Amit Boukai**
 - MD Candidate, Technion American Medical School
 - MPH, Emergency & Disaster Management, Tel Aviv University Sackler
 - B.S. Neuroscience, Indiana University



- **Jack Kustanowitz**
 - UX Software Developer
 - CEO, Peak 360 Ltd, Israel
 - Mountain Pass Technology, USA
 - BS, MS



- **Jeffrey Green**
 - Emergency Physician
 - Emergency Department, Assuta, Ashdod
 - Milwaukee VA Medical Center
 - MD

Team Structure

- Led by the combined management of Dr. Nadine Levick and Mr. Jack Kustonawitz from Peak 360, Tech experts, the Project Tech Intern
- Integrating staff from the Developers Institute to amplify the coding process
- Supported by the Medical, Technology and Product Development Advisory Panel, managed by Prof. Yaffa Zisk Rony with interdisciplinary medical and product development experts

Methodology: Approach

- Is divided into two steps, given the urgency of this project. The team will initially build out on a Mobile Web Platform in React native over 30 days, and based on input and feedback secondarily determine the merit to also develop in parallel, the android and iOS platforms.

Methodology: Development & Deployment

- An initial pilot mobile web platform release/evaluation will be followed by the Covid19AcuteMx Support Tool broad dissemination via multiple modalities into the frontline health care worker domain and via medical and nursing organizations, in addition to medical and nursing student organizations.
- The Team will continually monitor and evaluate and refresh the information and development of the Covid19AcuteMx Support Tool

Timeline:

Time line for this 6 month Project- Work time/Ramp up/Required Reporting	Pre-award Completion	1 Month blocks					
Project Tasks		1	2	3	4	5	6
Team Integration & resource gathering	X						
Collate, Update, Review and Analyze existing information on Covid19	X						
Build Prototype Interface	X						
Build Mobile Web Platform in React, Refine UX design		X	X				
Commence Pilot Dissemination of Mobile Web Platform		X	X	X			
Ongoing content Information peer review and update process		X	X	X	X	X	X
Capture Initial Use data on Mobile Web			X	X	X	X	
Integrate feedback from end users			X	X	X	X	X
Monitor, Evaluate and refresh				X	X	X	
Disseminate validated platforms Mobile Web					X	X	X
Reporting on usage outcomes						X	X
Build Prototype Interface Platform, Android and iOS				X	X	X	
Commence Pilot Dissemination of Android and iOS Platforms						X	
Monitor, Evaluate and refresh							X
Disseminate validated platforms Mobile Web							X
Amplification – Translation & broader dissemination of the Covid19AcuteMx Platform							X

Pre-award Milestones

as of 2020/08/31

- Completed a comprehensive global search of Covid19 acute care management material from: specific web sites, scientific papers, online references & tools, Twitter and other search engines
- Integrated and linked all identified information and data, and compiled into Wireframe layout
- Designed compelling UX interface – initially Mobile Web
- First round of rapid peer review of draft material completed
- Established hosting relationship with Amazon Web Services
- GoFundme site set up, <https://www.gofundme.com/f/covid19-acute-mx-support-tool-for-health-care>
- EU-Cocreate seed funding grant awarded July 2020 for accelerated rapid coding and deployment
- WHO and USAID linkage, August 2020

Go Fund Me

<https://www.gofundme.com/f/covid19-acute-mx-support-tool-for-health-care>

Search

How it works

Start a GoFundMe



Sign in

Share

Donate

Covid19 Acute Mx Support Tool for Health Care



TEAM FUNDRAISER

Nadine Levick and 5 others are organizing this fundraiser.

Created May 8, 2020

Medical, Illness & Healing

Your help is needed now !! Great News for this project - and for getting this tool onto the hands of the front-line health care workers as soon as possible!

We just got some **recognition from EU Co-create to join in getting this special tool to the front-line.**

We are a team of front-line healthcare providers and tech coders and have voluntarily developed **"The Covid19AcuteMx Support tool "**. This is a Mobile Web tool to help

\$2,700 raised of \$10,000 goal

21 donors 58 shares 20 followers



Share



Donate now

Anonymous
\$100 • 6 d

Anonymous
\$250 • 8 d

Alan Finkel
\$200 • 1 mo

Anonymous
\$500 • 1 mo

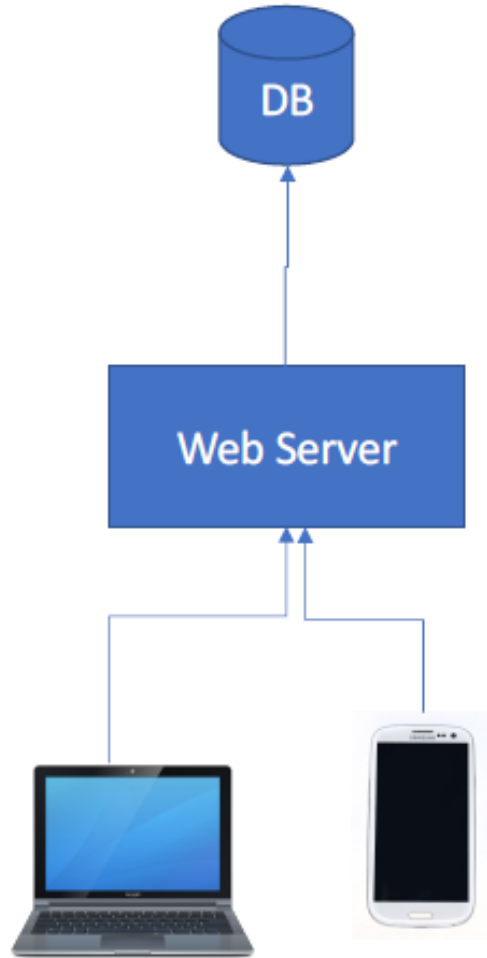
Ben-Ari Boukai
\$50 • 2 mos

See all

Inform WHO and USAID of Your Digital Health Solution for COVID-19 Response

- Covid19AcuteMx submitted August 13, 2020
- <https://www.ictworks.org/who-usaid-digital-health-solution-covid-19/#.XzjAT4gzaUk>

Covid19AcuteMx - Architecture



Database

- Content/Articles
- Assessment Questions
- Mild/Moderate/Severe Tracks
- Allow customization per location, as different facilities may have different protocols

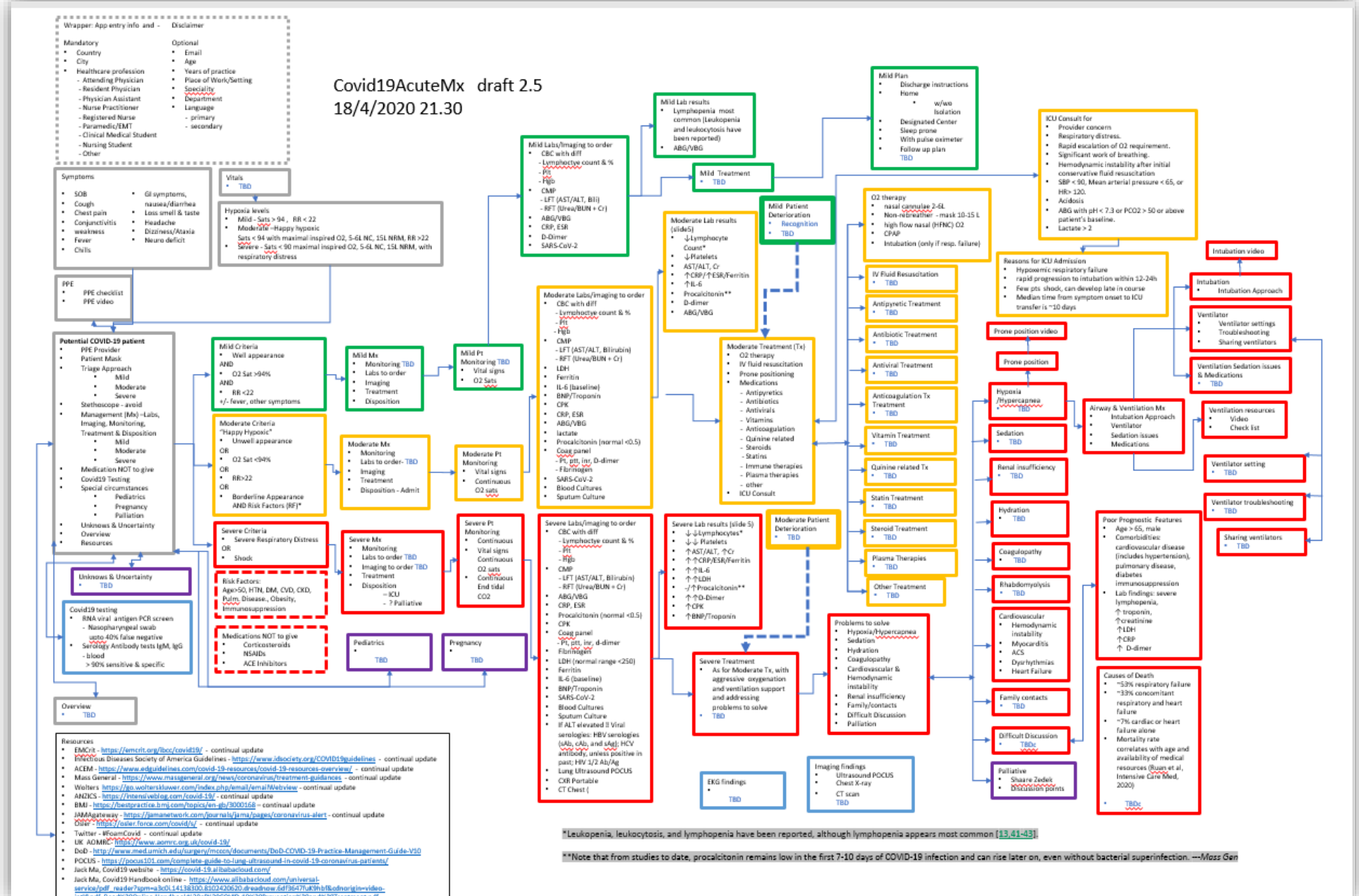
Web Server

- Standard REST interface to access Database

Clients

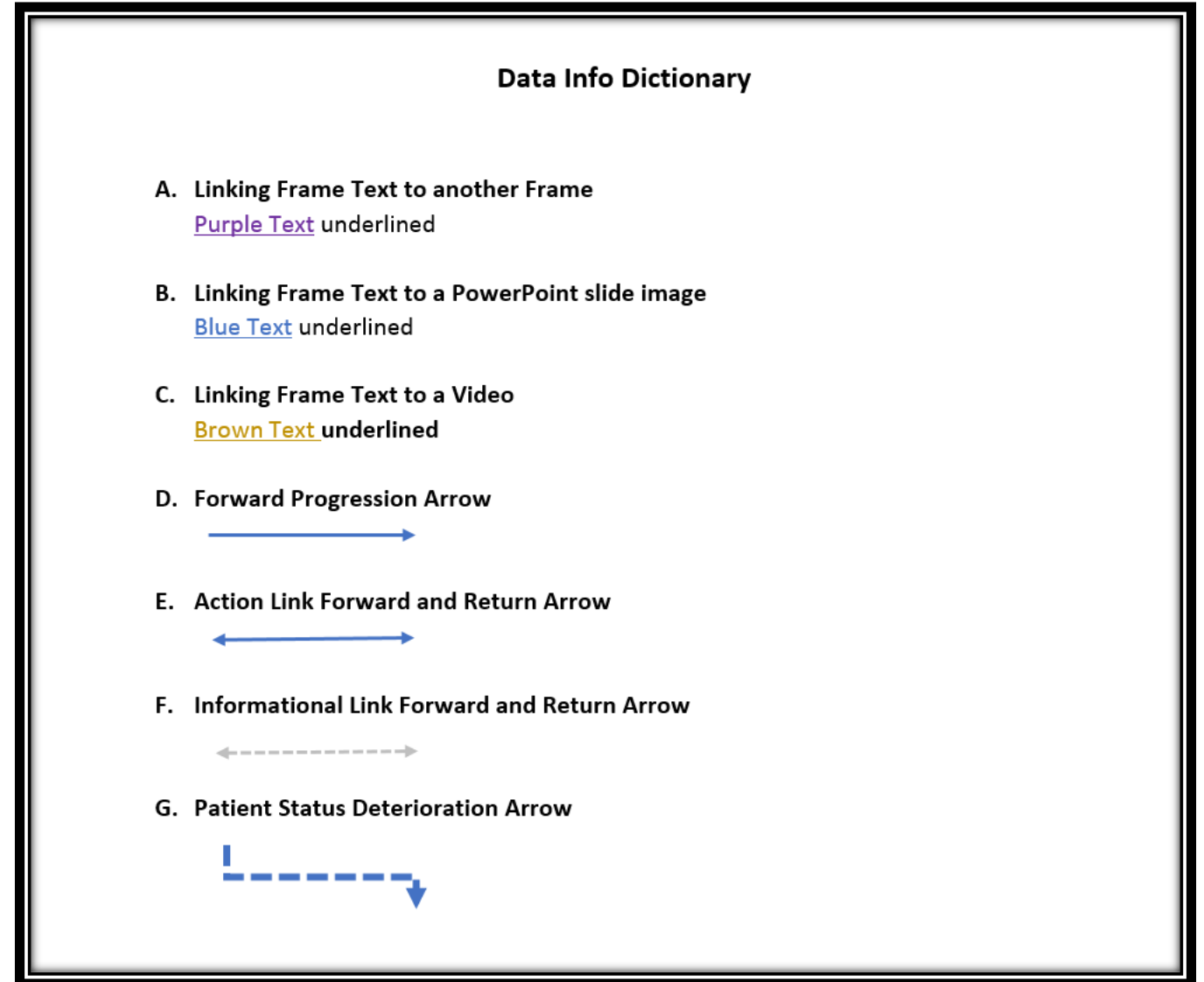
- Initially, primary interaction via mobile web browser
- Content viewable on a laptop/larger screen as well
- Phase 2: Native mobile app

Wireframe Outline for Technical App info

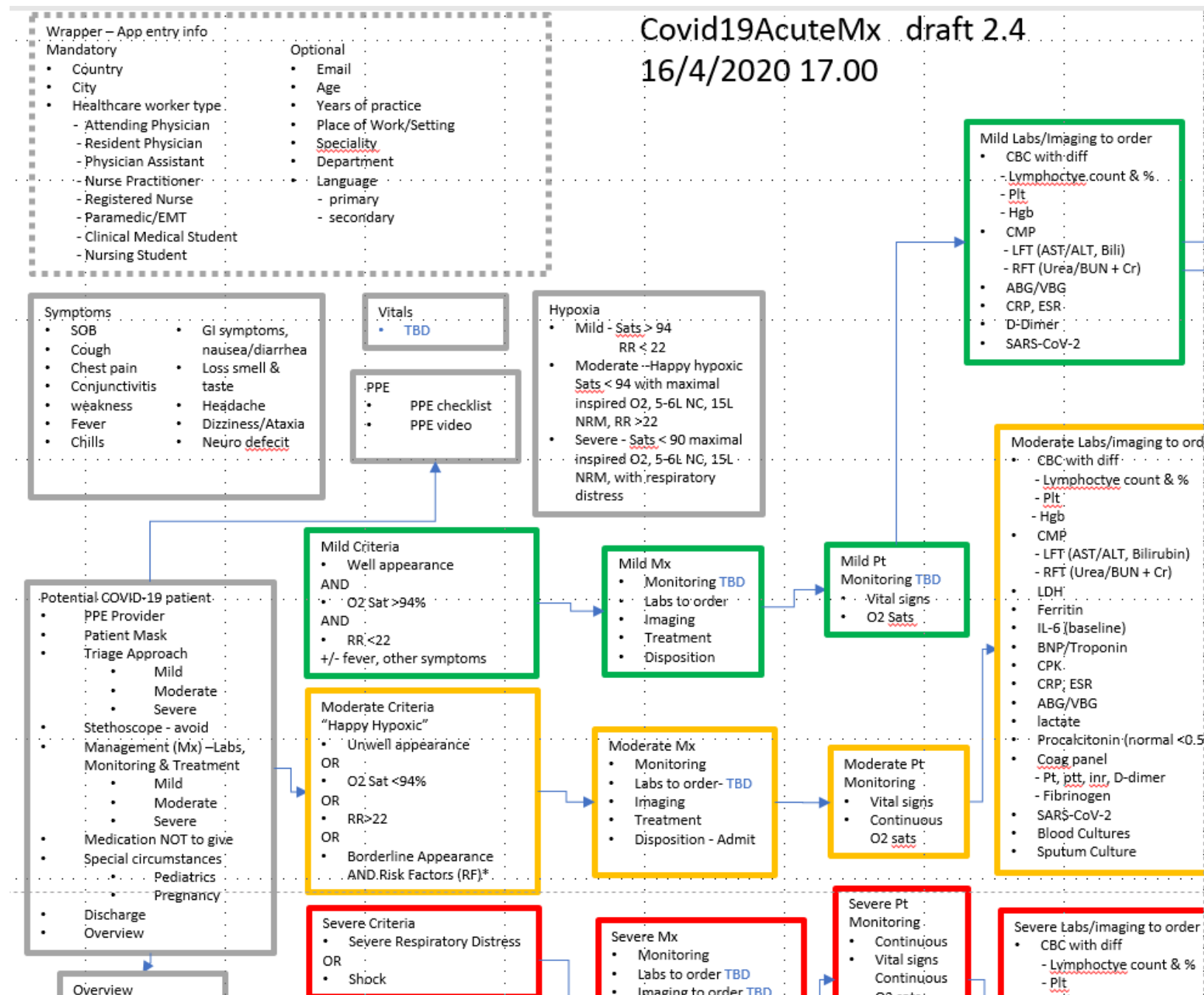


Data Info Dictionary

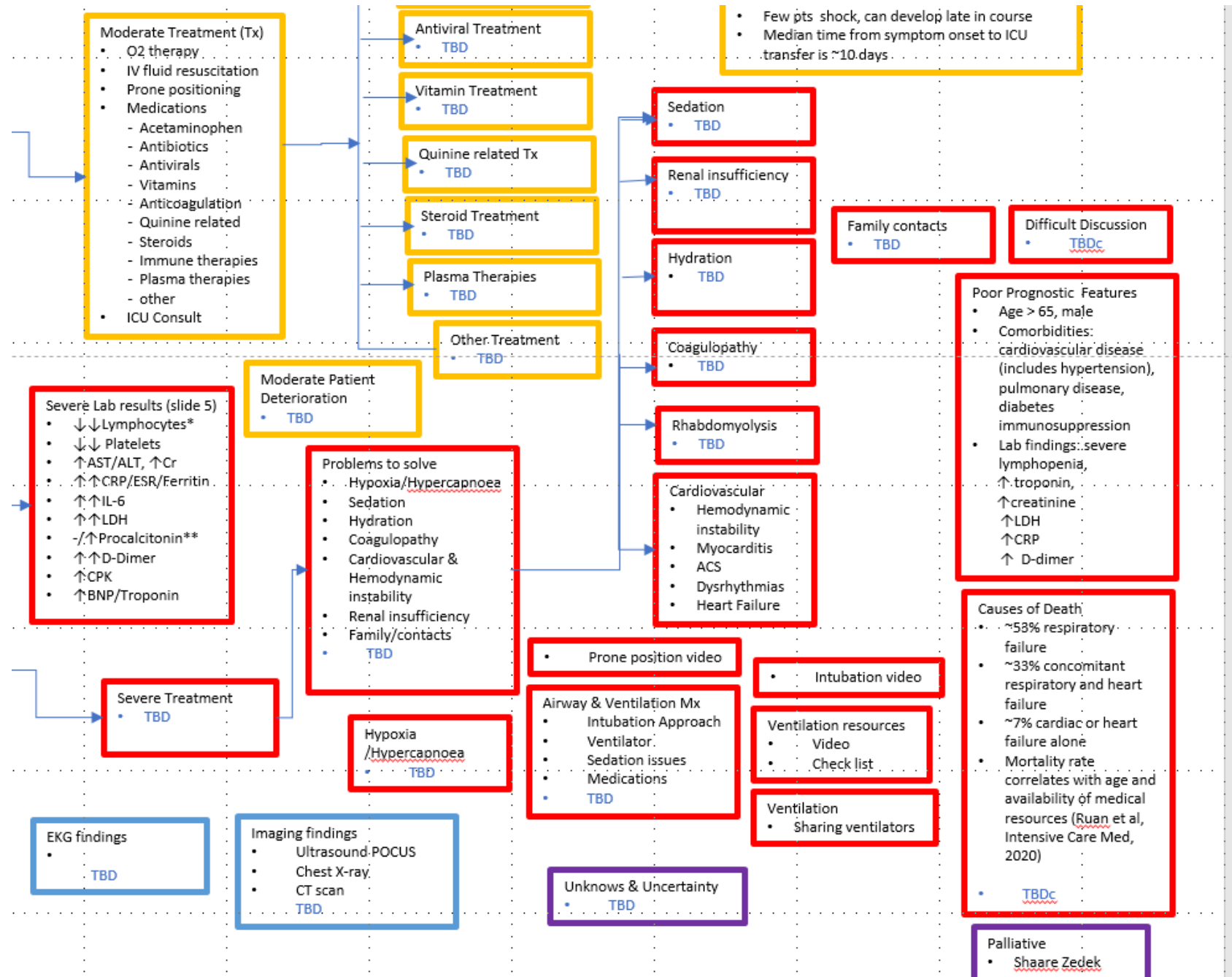
- For developers to navigate the technical resource document



Coding Entry Point

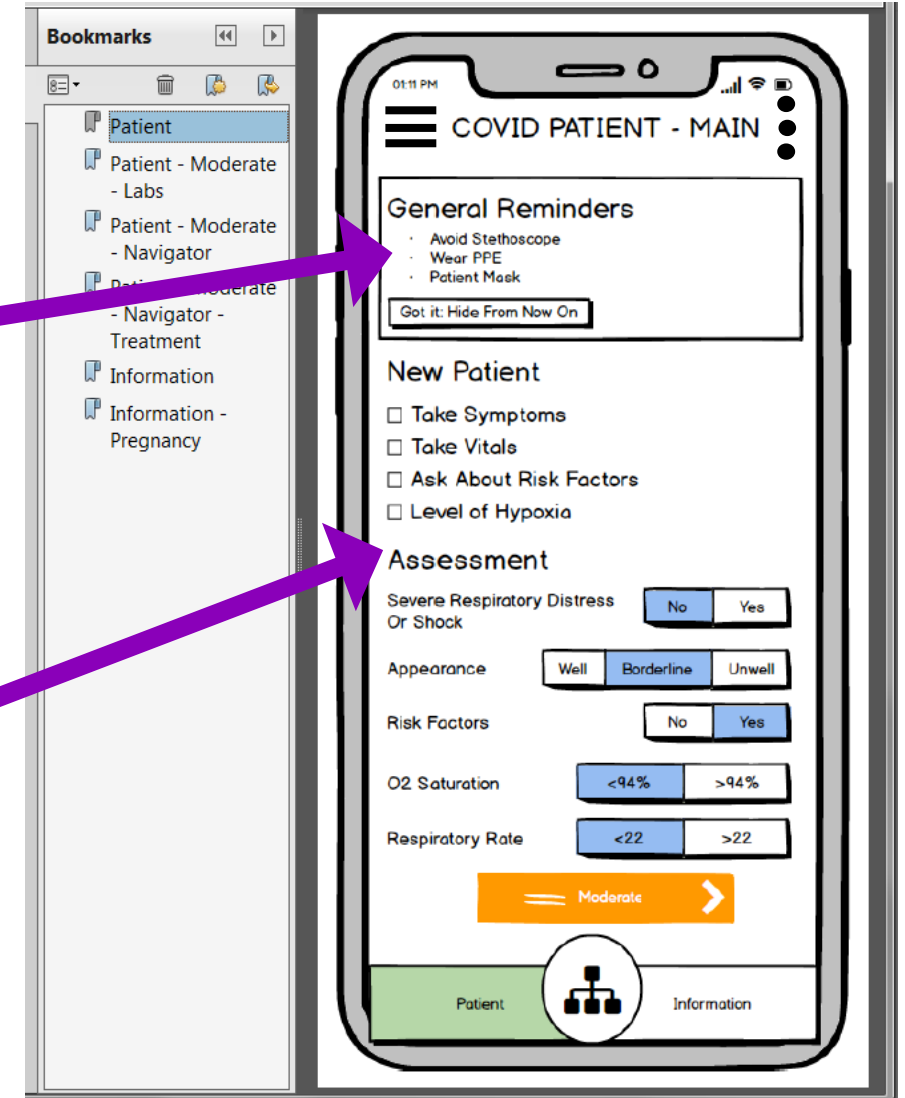


Coding info for Mx Guides



End user interface design – Initial Screen

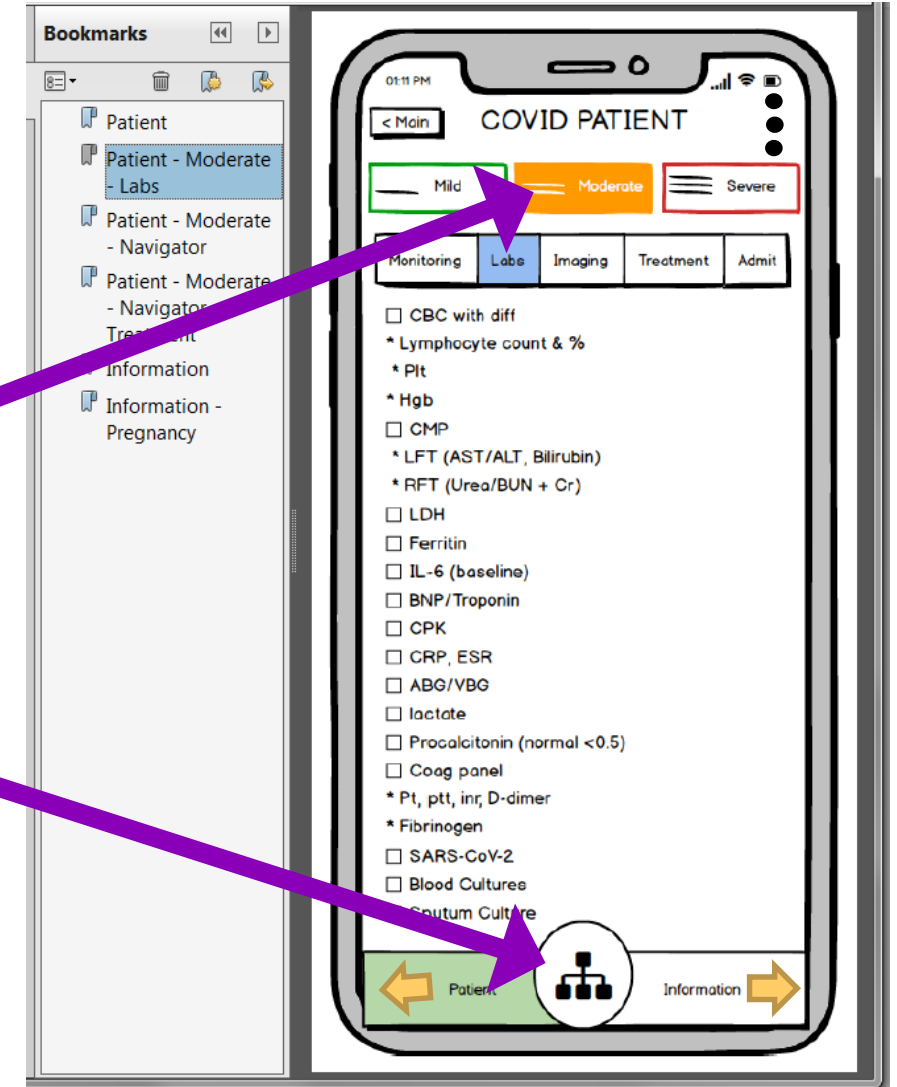
- No login required
- Safety reminders
- Check Patient Severity Assessment



Sample Labs Screen

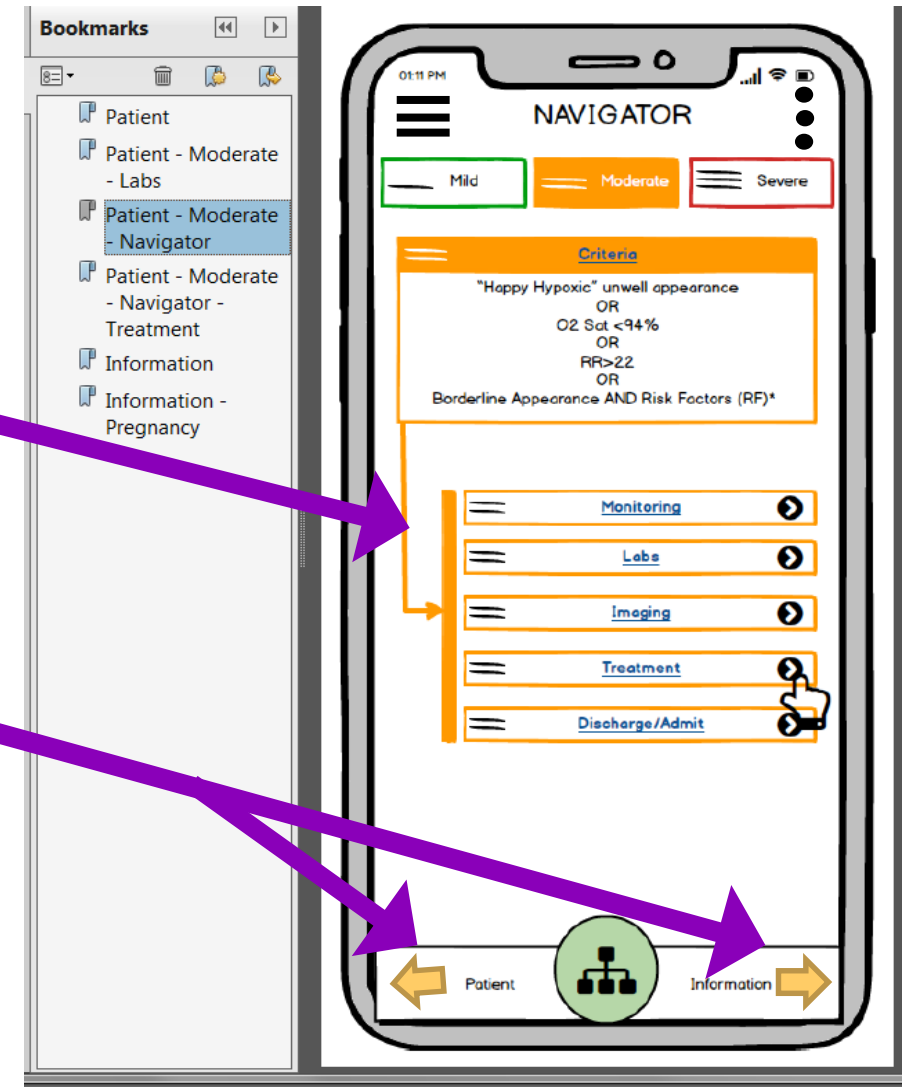
- Moderate Patient Labs tab

- To the road map



Sample Navigator Screen

- Moderate Patient Management Navigator screen
- Back and forward buttons



Sample Treatment Screen

- Drop down menu for: Clinical info

Admin info

- Moderate Patient Treatment information screen



Progress

- Daily global search of Covid19 management material
 - Web sites
 - Scientific papers
 - Online tools
 - Twitter
 - Other
- Material compiled
- App wireframe complete
- App design commenced – mobile web

Outcomes:

- Measure usage metrics in real time for tool
 - access at monthly intervals – from 1 month to 5 months from the time of deployment
 - which pathways and information in the tool are being accessed.
- Capture and measure
 - end user feedback in an ongoing manner, evaluate and integrate that input into advancing the development of the tool.
- Identify the:
 - countries accessing the tool
 - Mobile Web site hits and identify the spectrum of referral sites
 - types of end users by their health care background – students/not students
 - feedback from end users of quality, utility, effectiveness and value of the tool
 - the number of downloads of the Android and iOS platforms

Challenges

- Constantly changing dimensions of disease profile
- Limited evidence based treatment interventions
- Constantly changing clinical intervention approaches
- Distilling the information in a digestible format
- Strong UX on mobile Web (scope for android, iOs)
- Dissemination
- Updating process
- Monitoring use
- Sustainability

Budget Overview and Timeline

- Direct Cost €44,480 over 6 months
 - Personnel: €37,000 – PI Physician, CoPI UX, Col Software Developer, Col Graphic Designer, Project Manager, Information Manager, Tech Intern;
 - Consultants - Social Media & Legal €3,000
 - Supplies: Outreach tools: €1,300 ;
 - Subaward: €2,500 Developers Institute Tech Support,
 - Other expenses:
 - Data warehousing/cloud/server use €500,
 - Virtual conferencing €180

Next steps

- Rapid peer review of draft material
- Refine UX
- Build out on mobile web with inbuilt update
- Pilot release/evaluation
- Disseminate
- Monitor and evaluate and refresh
- Consider merit for android and iOs

Questions?