

Monthly EHR Vendor and Public Health Webinar: 2019-Novel Coronavirus (COVID-19) and Health Information Technology Sharing Session

February 18, 2020

Office of the National Coordinator for Health IT (ONC)

HHS Office of the Chief Technology Officer (OCTO)



Disclaimer

These calls are for discussion and outreach to the health information technology community only and should not be treated as attempts to disseminate scientific or health IT knowledge. The findings and conclusions in this presentation are those of the presenters and do not necessarily represent an official position of the US Department of Health and Human Services.

Please be aware that this webinar is being recorded.

Questions During the Presentation

228

You are viewing Fatema Nassen's screen View Options

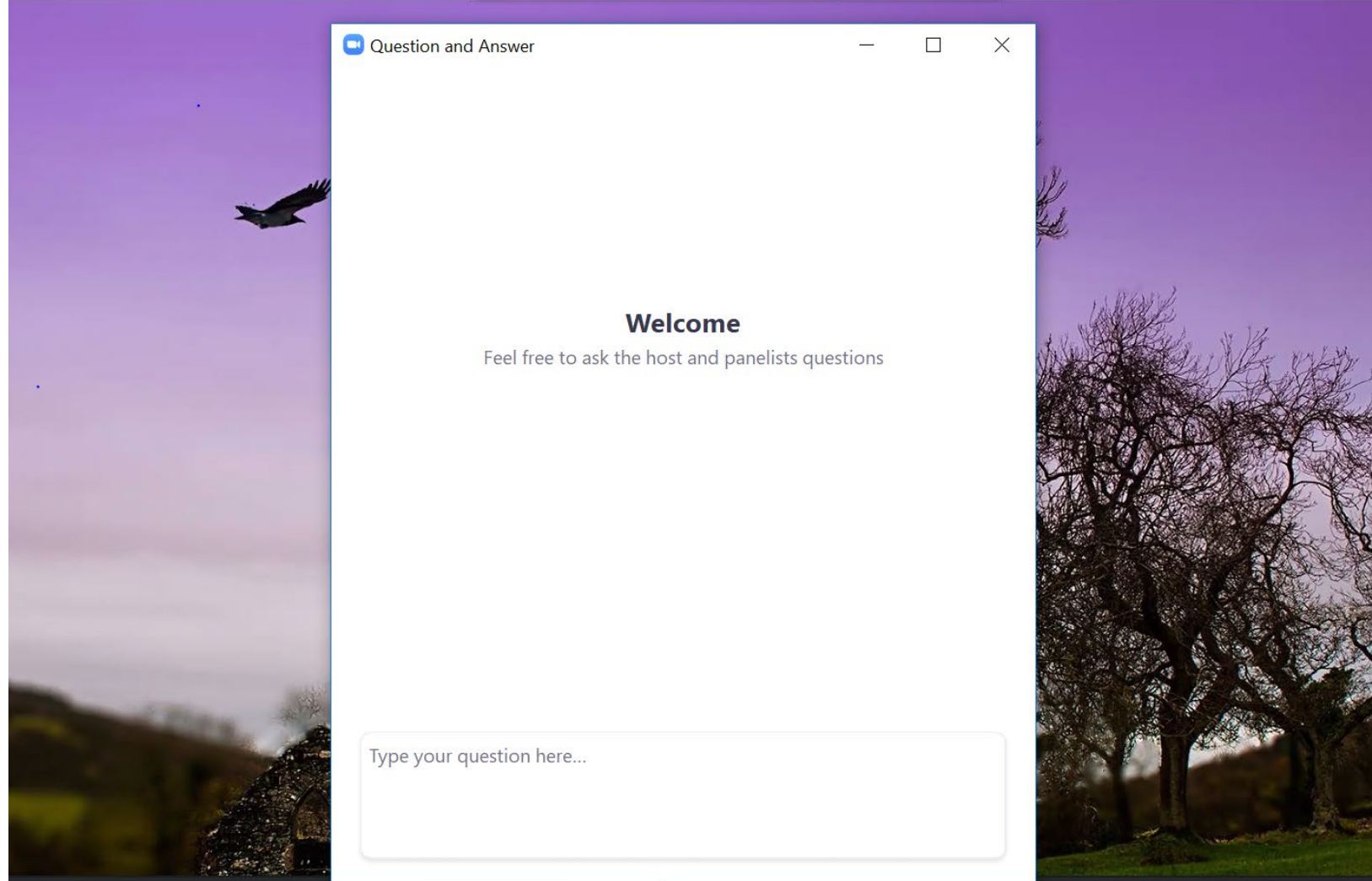
Question and Answer

Welcome

Feel free to ask the host and panelists questions

Type your question here...

Chat Raise Hand Q&A



Agenda

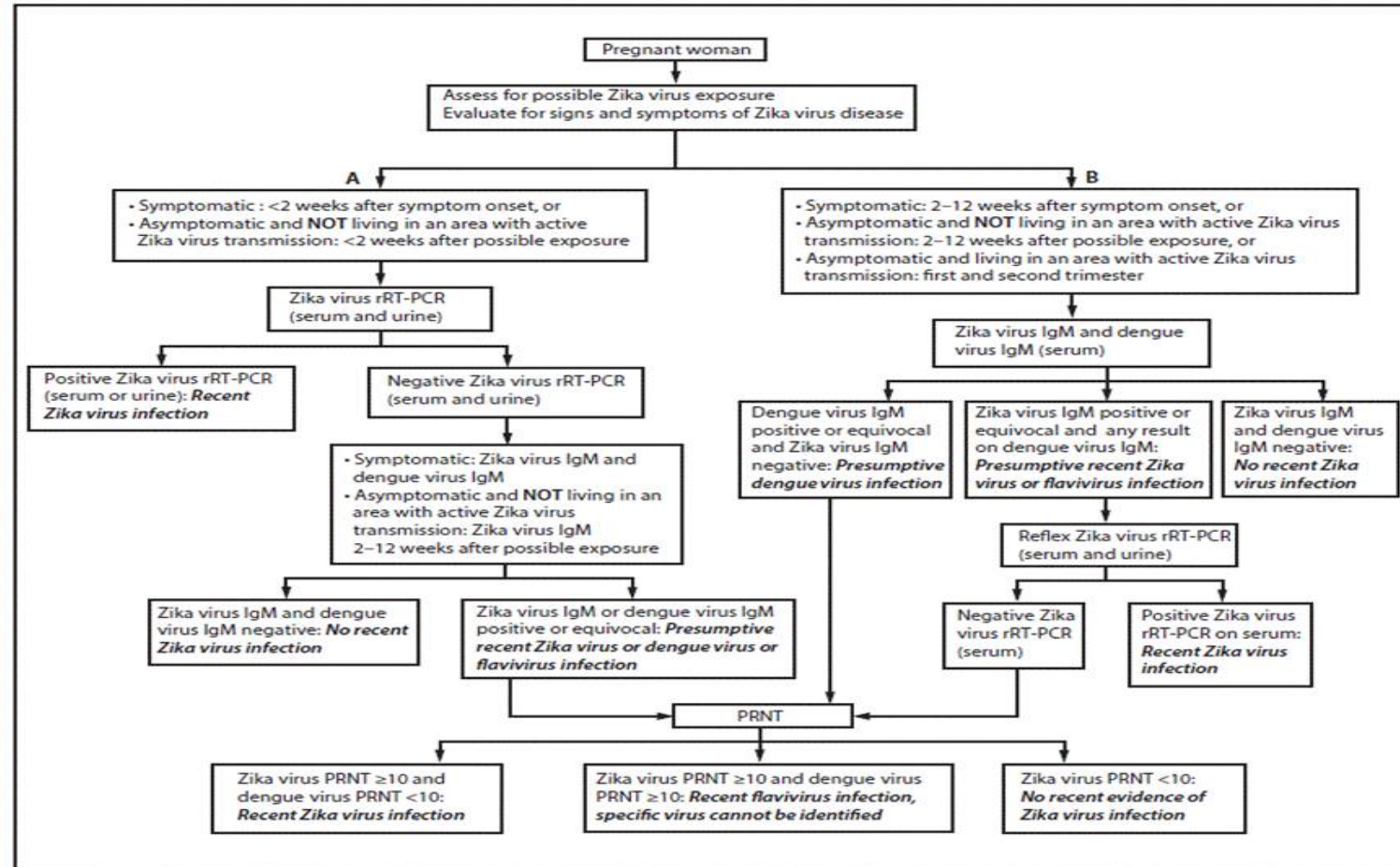
- Overview of Health IT for Zika and Ebola
 - James Daniel, HHS Office of the Chief Technology Officer
 - Daniel Chaput, Office of the National Coordinator for Health IT
- Electronic Health Records: Clinical Decision Support Lessons Learned with Ebola and Zika for Covid-19 (SARS-CoV-2)
 - Stephanie H. Hoelscher DNP, RN-BC, CPHIMS, CHISP, FHIMSS, Associate Professor, Graduate Informatics, Texas Tech University Health Sciences Center School of Nursing
 - Susan McBride, PhD, RN-BC, CPHIMS, FAAN, Professor, Texas Tech University Health Sciences Center School of Nursing
 - Dwayne Hoelscher, DNP, RN-BC, CPHIMS, Professional Clinical Systems Analyst, Core Services UMC Health System
- Q&A/Discussion

Activities from Past Response Efforts

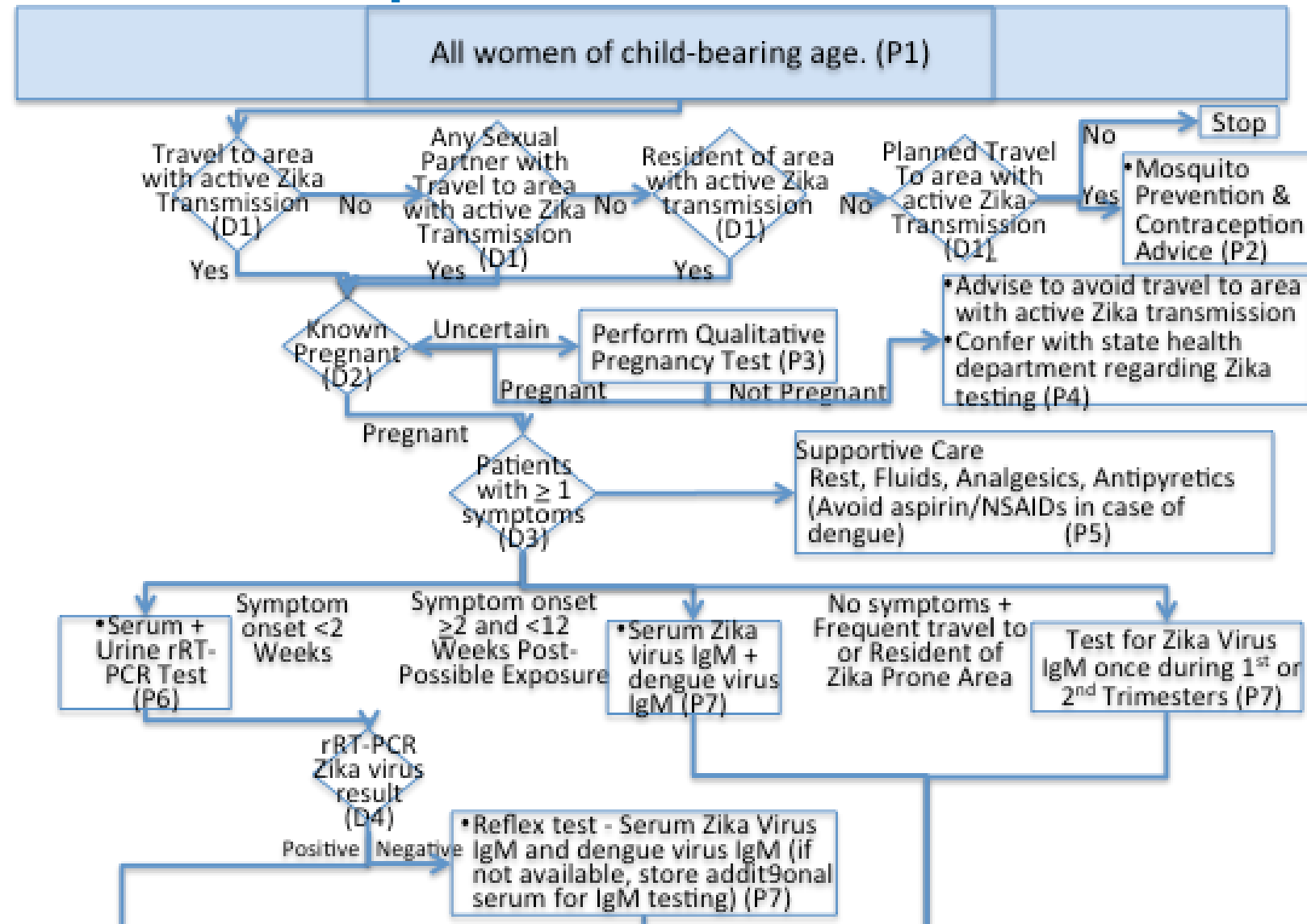
- Building upon lessons learned from previous disasters (e.g., Zika, Ebola, hurricanes)
- Vendor Outreach (i.e., EHR vendor/public health webinars)
- Algorithm Development
- Static Websites
- Vocabulary Sets
- Order Sets

Pregnant Women & Zika: Guidance for Clinicians

FIGURE. Updated interim guidance: testing and interpretation recommendations*†-5,¶ for a pregnant woman with possible exposure to Zika virus — United States (including U.S. territories)**



Algorithms for Developers



Algorithms for Developers (Information)

1. Areas with active Zika transmission	<p>Areas of known Zika virus transmission. http://www.cdc.gov/zika/geo/index.html</p>
2. Travel and Mosquito Prevention Advice	<p>a. Advice for patients about how to avoid Mosquito bites. http://www.cdc.gov/zika/prevention/index.html</p> <p>b. Advice for patients about which mosquito repellents are effective and safe to use in pregnancy. [DEET, IF3535 and Picardin are safe during] https://www.epa.gov/insect-repellents/find-insect-repellent-right-you</p>
3. Prevention of Sexual Transmission	<p>The most current interim guidelines for prevention of sexual transmission of Zika virus. http://www.cdc.gov/zika/transmission/index.html http://www.cdc.gov/mmwr/volumes/65/wr/mm6512e3.htm</p>
4. Signs and Symptoms	<p>Signs and Symptoms of Zika virus disease and information about how a clinician might differentiate Zika virus infection from other similar infections. http://www.cdc.gov/zika/symptoms/index.html</p>
5. Possible microcephaly association	<p>Known information about association between Zika virus infection and microcephaly and other known complications. http://www.cdc.gov/ncbddd/birthdefects/microcephaly.html</p>
6. Zika Virus Diagnostic Testing	<p>Explanation of diagnostic tests for Zika virus and which to use based on the patient's clinical and exposure history. http://www.cdc.gov/zika/hc-providers/diagnostic.html</p>

Algorithms for Developers (Value Sets)

Public Health Information Network Vocabulary Access Distribution System (PHIN-VADS)

<https://phinvads.cdc.gov/vads/SearchVocab.action>

PHIN VADS Hot Topics

Zika virus disease associated Lab Vocabulary (ELR) - Includes value sets associated with lab testing algorithm for Zika, Chikungunya and Dengue

[FILE: Zika Lab Test Information 20160517.pdf](#) - Testing algorithm information for Epidemiologist and Lab experts using standard vocabulary

[FILE: Zika virus codes for ELR 20160517.xlsx](#) - Technical information for ELR IT staff - LOINC and SNOMED codes

[LINK: Information for State Public Health labs from CDC](#)

Zika vocabulary for EHR and Health IT vendors - Includes value sets for implementing the CDC's interim guidelines which could be used by EHR community for decision support or pick list.

[LINK: Zika affected areas](#)

[FILE: Zika Virus Vocabulary for EHR - 02_01_2016.pdf](#) - Includes value sets associated with Zika, Dengue, Chikungunya, Arboviral diseases, Pregnancy, Newborn and Infant.

[FILE: Zika related CPT procedure codes 04152016.pdf](#) - CPT procedure codes associated with Zika lab tests and imaging.

COVID-19 (Information)

- | | |
|---|---|
| 1. Coronavirus Disease 2019 (main CDC website) | https://www.cdc.gov/coronavirus/2019-ncov/index.html |
| 2. Evaluating and Reporting Persons Under Investigation (PUI) | <ul style="list-style-type: none"> • https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-criteria.html • https://www.cdc.gov/coronavirus/2019-ncov/downloads/pui-form.pdf • https://www.cdc.gov/coronavirus/2019-ncov/hcp/identify-assess-flowchart.html |
| 3. CDC PUI Form | |
| 4. Flowchart to Identify and Assess 2019 Novel Coronavirus | |
| 5. Interim Healthcare Infection Control Guidance | |
| 6. Interim Clinical Care Guidance | https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html |
| 7. Home Care Guidance | https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-home-care.html |
| 8. Guidance for EMS | https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html |
| 9. Healthcare Personnel with Potential Exposure Guidance | https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html |
| 10. CDC guidelines for collecting, handling and testing | https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html |

COVID-19 (Information)

Coronavirus Disease (COVID-19) outbreak (World Health Organization)	https://www.who.int/emergencies/diseases/novel-coronavirus-2019
Coronavirus disease (COVID-19) guidance (WHO)	https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance
LOINC (Prerelease Terms)	https://loinc.org/prerelease/
SNOMED CT	http://www.snomed.org/news-and-events/articles/changes-coronavirus-descriptions

Electronic Health Records: Clinical Decision Support Lessons Learned with Ebola and Zika for Covid-19 (SARS-CoV-2)



Electronic Health Records can help us with identification and treatment protocols/guidelines



To work effectively these features need to work in tandem, and be well designed to support patient-centered care and accurate, efficient diagnoses and treatment.

- **WORKFLOW IS CRITICAL**
- **HUMAN FACTORS ARE EQUALLY AS IMPORTANT**

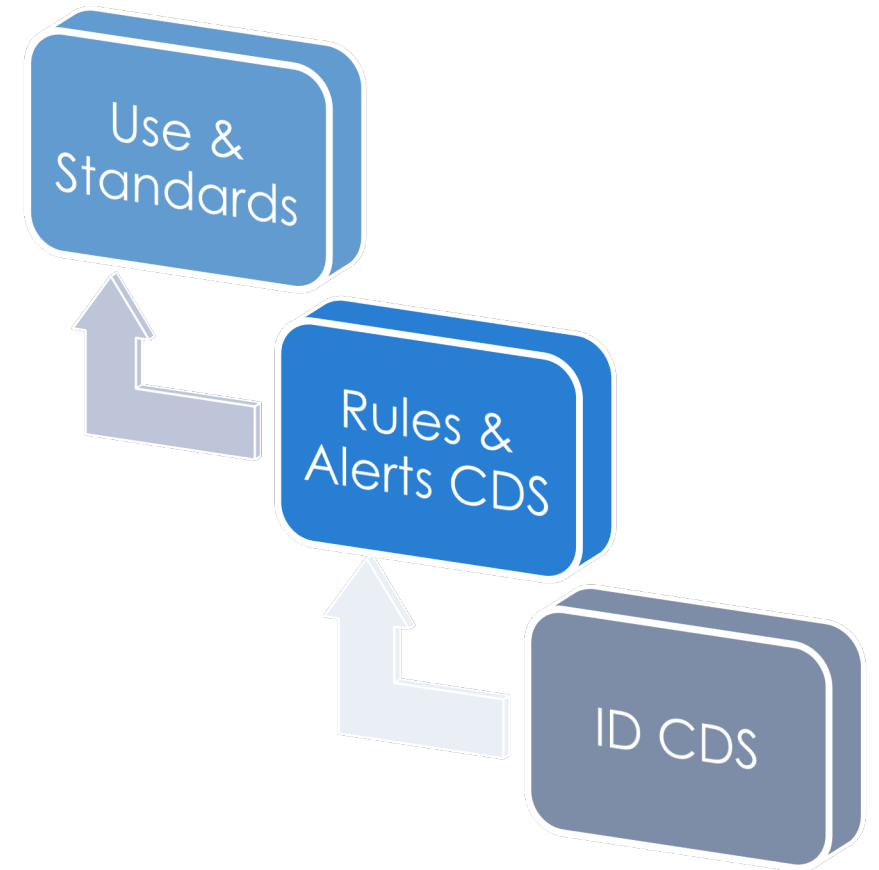
Many successful lessons learned from collaborative efforts for Ebola and Zika response that we can translate to nCoV.

History of Infectious Disease Clinical Decision Support

- Ebola
 - Dallas/Fort Worth patient
 - Poor rule maintenance (financial, automated orders, locations, etc.)
 - Local design/build efforts
- Zika
 - Vested ownership of infectious disease process developed; maintenance policy and schedule
 - Development of a rapid deployment model; looking for “virus X”
 - Partnership with CDC/ONC for testimony of best practice for Zika EHR design and build
- Coronavirus
 - Real-world deployment of model; running within 2 hours with adherence to interim CDC guidelines
 - Improved vendor timelines averaged days to two weeks

Governance

- Focus Group
 - ID Providers
 - Institutional Infection Prevention & Control
 - Clinician Informaticists
- Emergency Governance
 - ID Providers
 - Change Control Leadership
 - Often verbal, followed with written
 - Real-time approval process for emergencies
- Traditional Governance
 - Executive Buy-in; Directors/Managers
 - Physician/Nurse Leadership
 - Always written, followed by onsite meetings to discuss

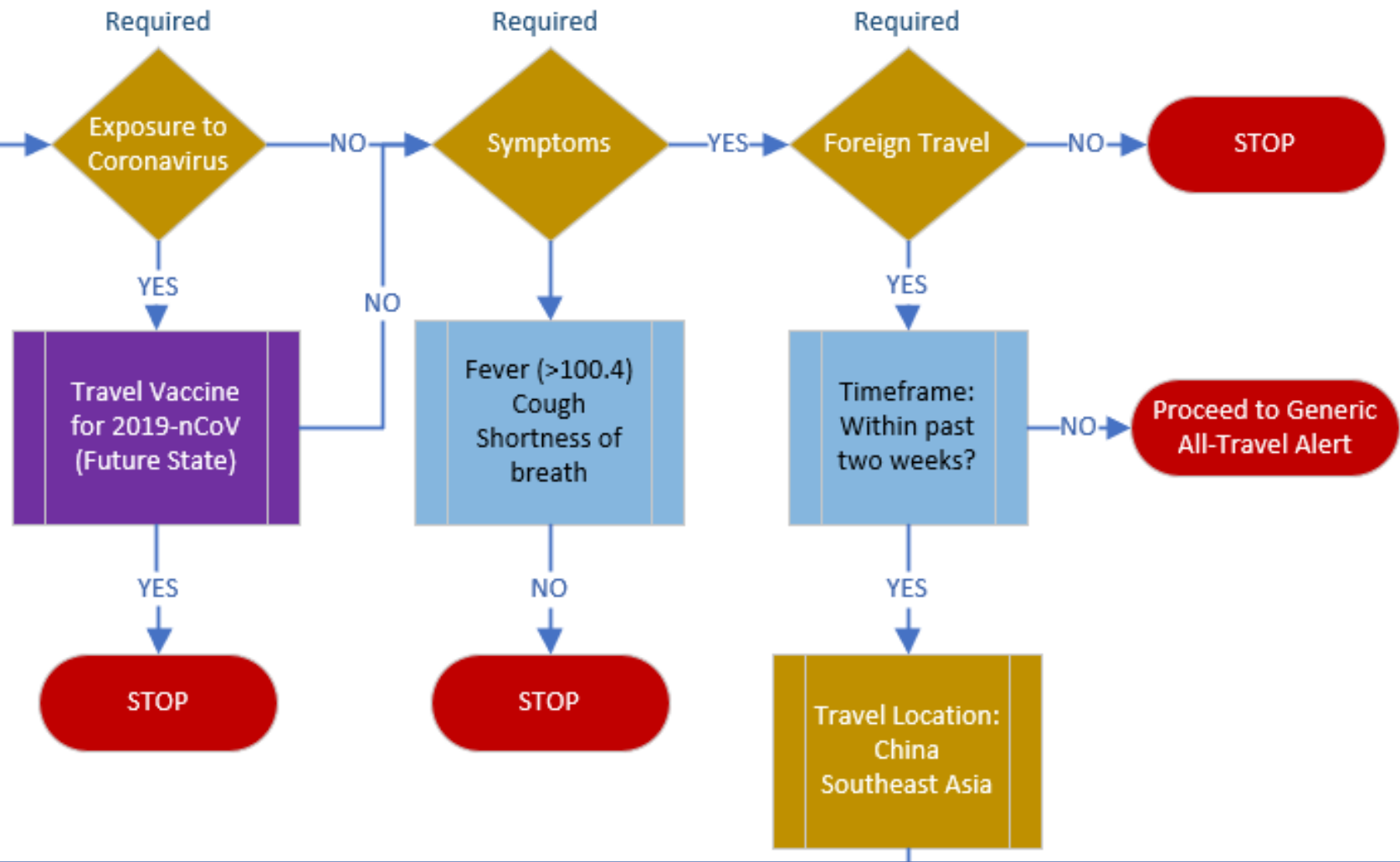


START

Infectious Disease
Nursing Intake
Assessment

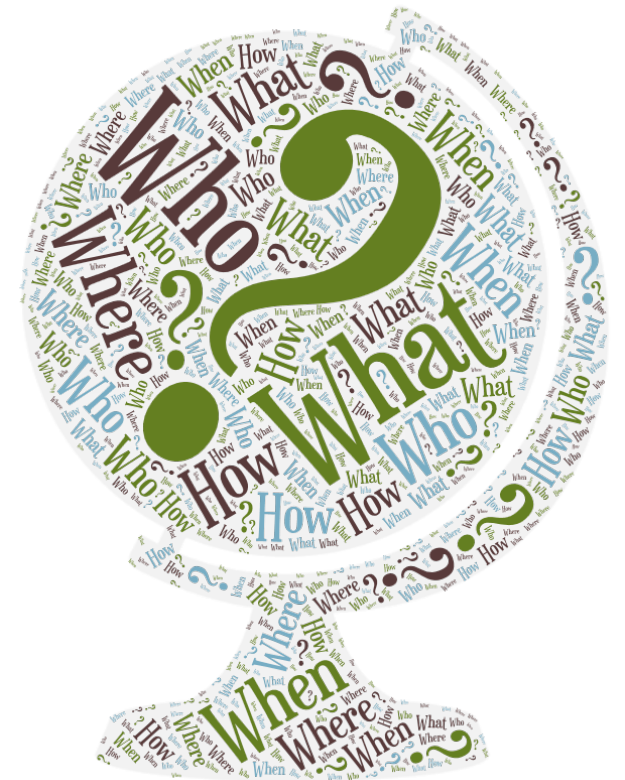
Intake assessment
completed at all points of
entry in health system
(e.g., EC, L&D, Ambulatory)

LEGEND:
PROCESS BEGINS
PROCESS/DATA
PROCESS ENDS
REQUIRED FIELD
ITEMS TO NOTE
FUTURE STATE



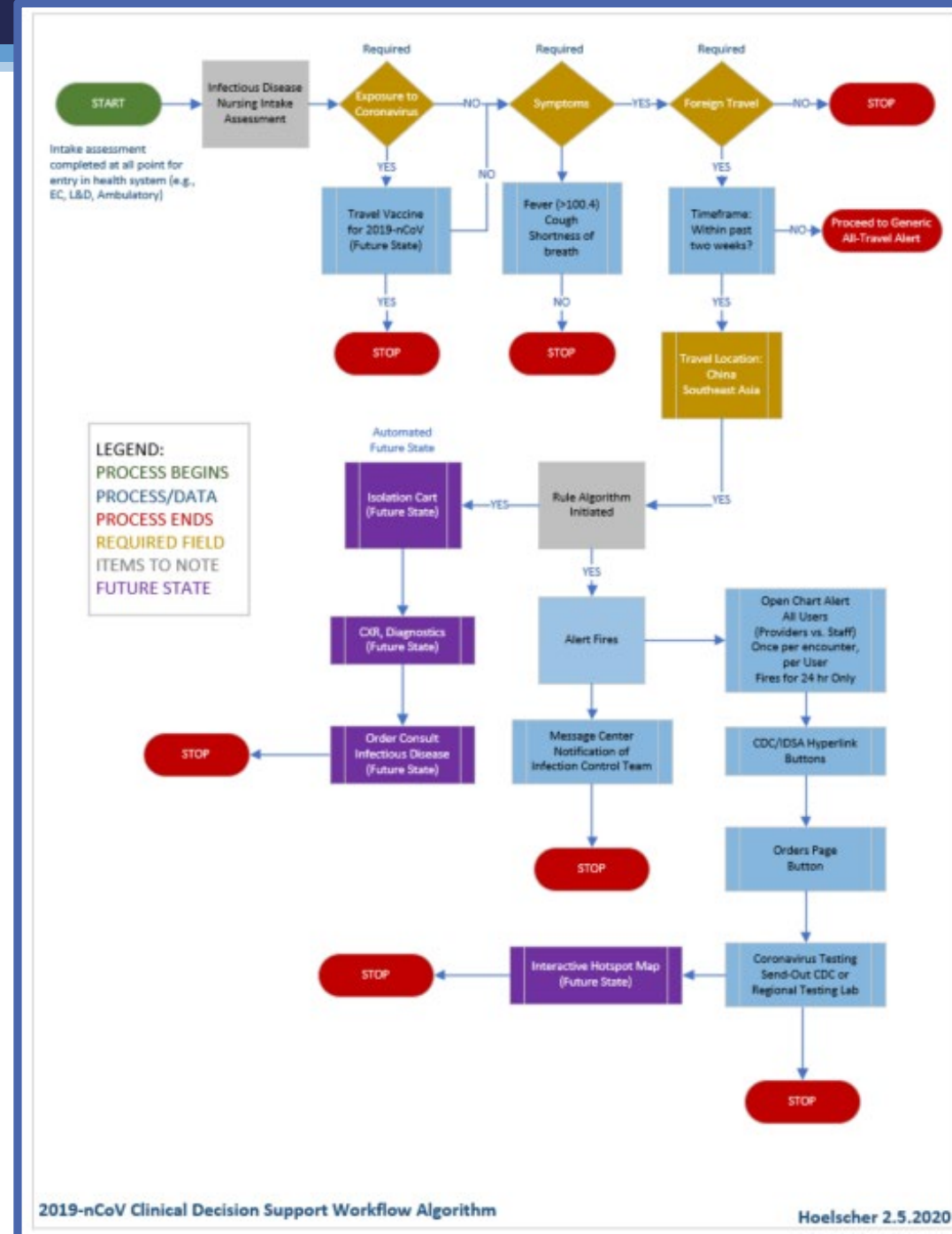
Coronavirus EHR Workflow

- Algorithm feeds from data fields and conditional logic created with a nursing form
 - Nursing form assessed at all points of entry
 - Still risk of missing someone
 - Direct admit where form not completed until already in hospital
 - Outpatient radiology, laboratory, etc.
 - If algorithm does not qualify for coronavirus, proceeds to generic algorithm
- Future state options mapped out for pending functionality
 - Interactive maps
 - Automated orders
 - Isolation carts, consult orders, diagnostics, etc.



Coronavirus EHR Workflow

- Modified MERS algorithm
 - Rapid deployment model
- CDC guidelines
 - Interim, but stable
- Rule prioritization
 - Which alert carries more weight?
 - e.g., Ebola > Zika
- Boolean logic
- Applicable/buildable across platforms
 - Can be made to fit YOUR workflow



Gaps in Current State

- CDC guidelines currently still in interim state, although stable
 - Finalizing any design or build not impossible; maintenance issues for custom and vendors
 - Guideline interpretation still manual by local clinical informaticist and providers
- Although CDC has started (2.6.2020) shipping test kits to laboratories around the nation...
 - Still a send out for local healthcare facilities = testing delays
 - Still a paper “send-out” order, or a generic send-out order in the EHR (if one already currently exists; would need new data fields specific to coronavirus)
- Financial risk with automation of orders
 - Automated orders such as chest x-rays or isolation carts pose financial risk to the institution due to potential inaccuracy of nursing documentation and/or low risk of ID occurrence in specific regions (e.g., rural)
 - Ebola alert and isolation cart example

Questions?

- Dwayne Hoelscher DNP, RN-BC, CPHIMS
 - Dwayne.Hoelscher@umchealthsystem.com
 - @DwayneHoelscher
- Stephanie H. Hoelscher DNP, RN-BC, CPHIMS, CHISP, FHIMSS
 - Steph.Hoelscher@ttuhsc.edu
 - @StephHoelscher
- Susan McBride PhD, RN-BC, CPHIMS, FAAN
 - Susan.Mcbride@ttuhsc.edu
 - @smcbride_01



Q&A/Discussion



The Office of the National Coordinator for
Health Information Technology

Contact ONC & OCTO

Rachel Abbey (rachel.abbey@hhs.gov)

Daniel Chaput (daniel.Chaput@hhs.gov)

James Daniel (james.daniel@hhs.gov)



Phone: 202-690-7151



Health IT Feedback Form:
<https://www.healthit.gov/form/healthit-feedback-form>



Twitter: @onc_healthIT



LinkedIn: Search “Office of the National
Coordinator for Health Information Technology”



**Subscribe to our weekly eblast
at [healthit.gov](https://www.healthit.gov) for the latest updates!**