Crafting Actionable Leadership Initiatives

Using OODA as a Systematic Framework for Professional Development in the Age of COVID-19 and Beyond

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Learning Objectives

- At the end of this session, the participant should be able to:
  - Define the shifting dynamic in the medical hierarchy, and identify how this dynamic has affected the PAs role in management & leadership
  - Describe the historical development and prior situational applications of OODA Loop Frameworks
  - Delineate the main features of the acronym O-O-D-A
  - Explain how OODA can be used in the healthcare setting to create actionable leadership initiatives
  - Create OODA Loop initiatives specific to each PAs individual specialty/practice setting for the purpose of PA leadership and professional development

Disclosure

- I have no financial relationships with commercial interests to disclose

Pretest Question #1

- **Which of the following statements accurately represents the current role of PAs as leaders?**
  - A. PAs are at the bottom of the top-down medical leadership hierarchy.
  - B. PAs exert an exclusively downward direction of power and influence.
  - C. PAs reinforce a primarily top-down medical leadership hierarchy.
  - D. PAs provide upward power and influence by contributing contrary thinking to higher authorities.
  - E. None of the above

Pretest Question #2

The four steps of the OODA Loop decision making acronym are:

A. Objectification, Omission, Deceleration, Admission
B. Observation, Orientation, Decision, Action
C. Open, Orient, Discuss, Accept
D. Obtain, Optimize, Declare, Attempt
E. None of the above

Pretest Question #3

Which of the following statements accurately describes the use of OODA loops?

A. The Observation step of an OODA loop is largely comprised of placing existing data into a local context.

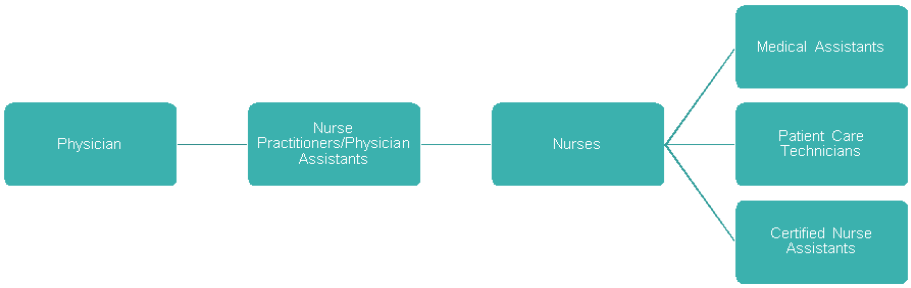
B. During the Optimize step of an OODA loop the most efficient problem-specific solution is determined.

C. The Action step of an OODA loop is largely comprised of the collection of data.

D. The Decision step of an OODA loop also involves the storage of non-germane, poorly actionable data for future analysis.

E. None of the above.

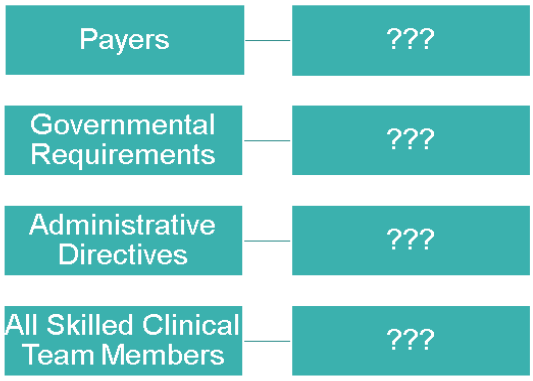
Leadership in the PA Profession (Huckabee, 2018)



- Traditional Medical Leadership Hierarchy- Top down
  - Physician Led

Shifting dynamic of medical hierarchy (Huckabee, 2018)

- Disruption of Top-Down Hierarchy – Topsy Turvy

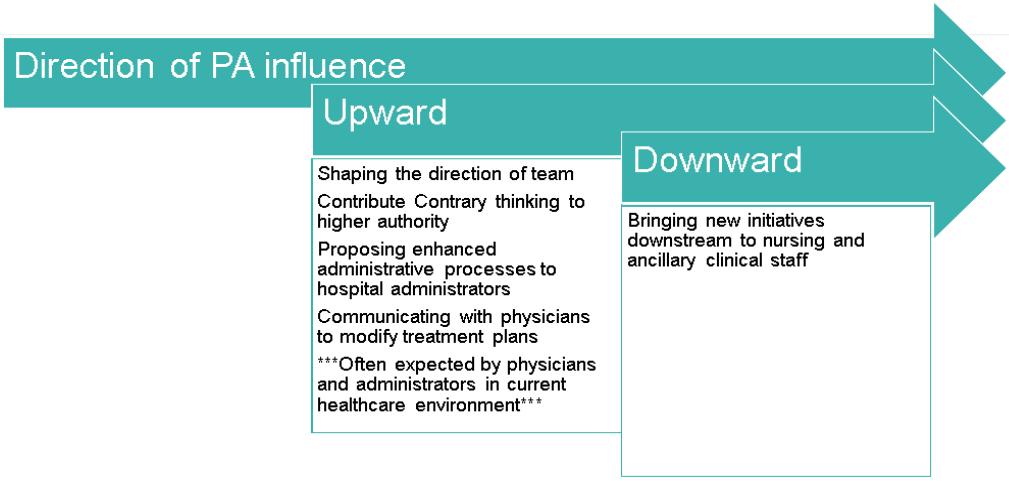


PA role in management/leadership (Huckabee, 2018)

- Leads by Example and Action
- Gains Made in:
  - Team Dynamics
  - Workload balance
  - Patient Satisfaction
  - Fiscal Bottom Lines
  - Clinical Outcomes

Further Disruption of Top Down Hierarchy!

Power and Influence in the PA Role (Huckabee, 2018)

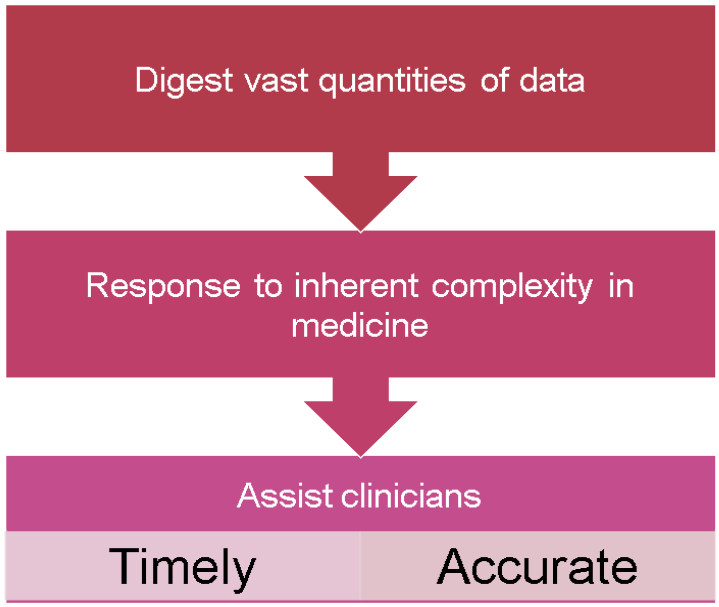


Rationale for OODA

(Wickramasinghe et al., 2009)

- Clinicians are constantly exposed to complex and unstructured situations:
  - Involving multiple layers of data
  - Requiring rapid and accurate analysis
- Examples
  - Seasonal influenza
  - COVID-19 Pandemic

Decision making tools (Wickramasinghe et al., 2009)



Decision Tool: O-O-D-A or OODA loops

(Enck, 2012, Liebler, 2017)

Originally conceived by Colonel John R. Boyd

Analysis of American fighter pilot maneuvers

Four steps

Observation

Orientation

Decision (Determine)

Action

OODA Explained

1. **Observation**

   Data collection

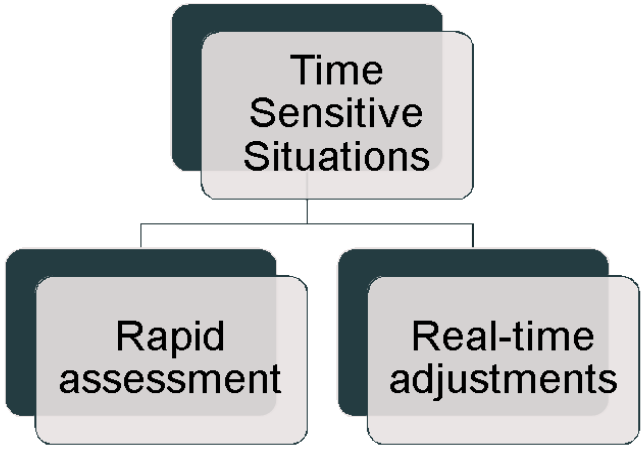
   - Outside inputs - historical and static features of subjects of interest
   - Inside inputs – dynamic, dependent on unfolding circumstances

2. **Orientation**
   - Data analysis
   - Places outside and inside inputs into local context
   - Generation of germane data

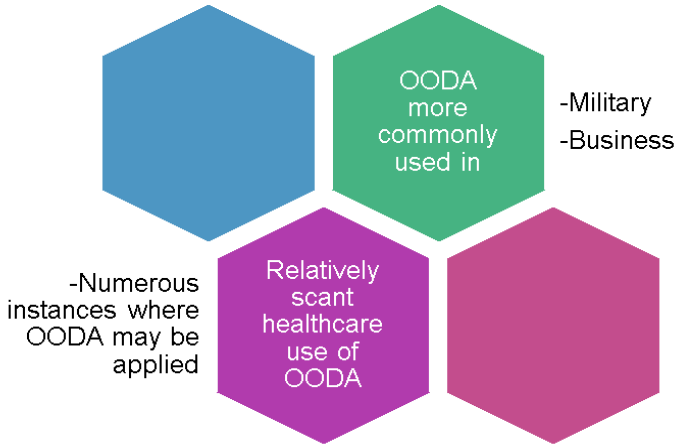
3. **Decision -**
   - Determination of actionable plan
   - Storage of non-germane data for future analysis

4. **Action**
   - Putting actionable plan into effect

OODA Loops –Segmentation of Decision Making (Liebler, 2017)



Healthcare OODA Applications (Enck, 2012)



OODA in Healthcare

(Enck, 2012)

- Healthcare scenarios involving
  - Continuous feedback
  - Planning
  - New alternatives in management
  - Structured and dynamic planning

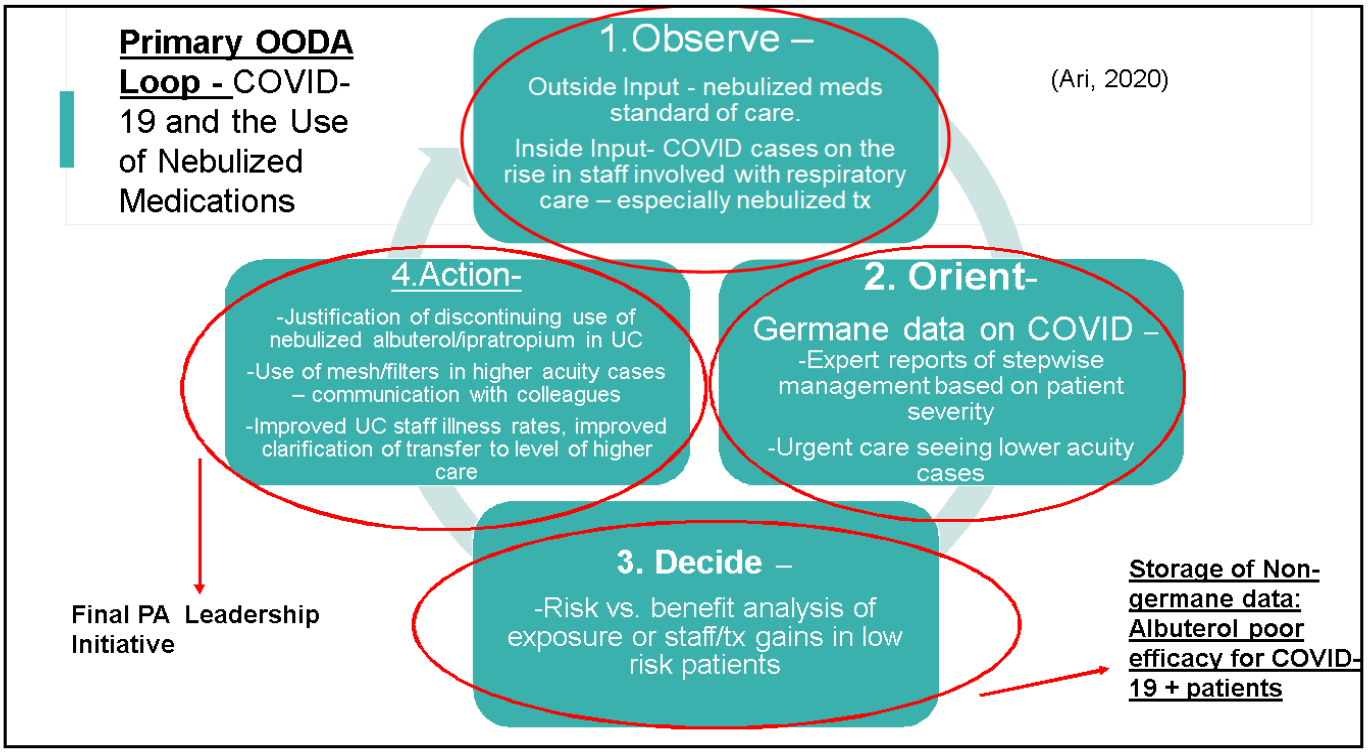
OODA Application Example #1
- Novel COVID-19 and the Use of Nebulized Medications (Ari, 2020)

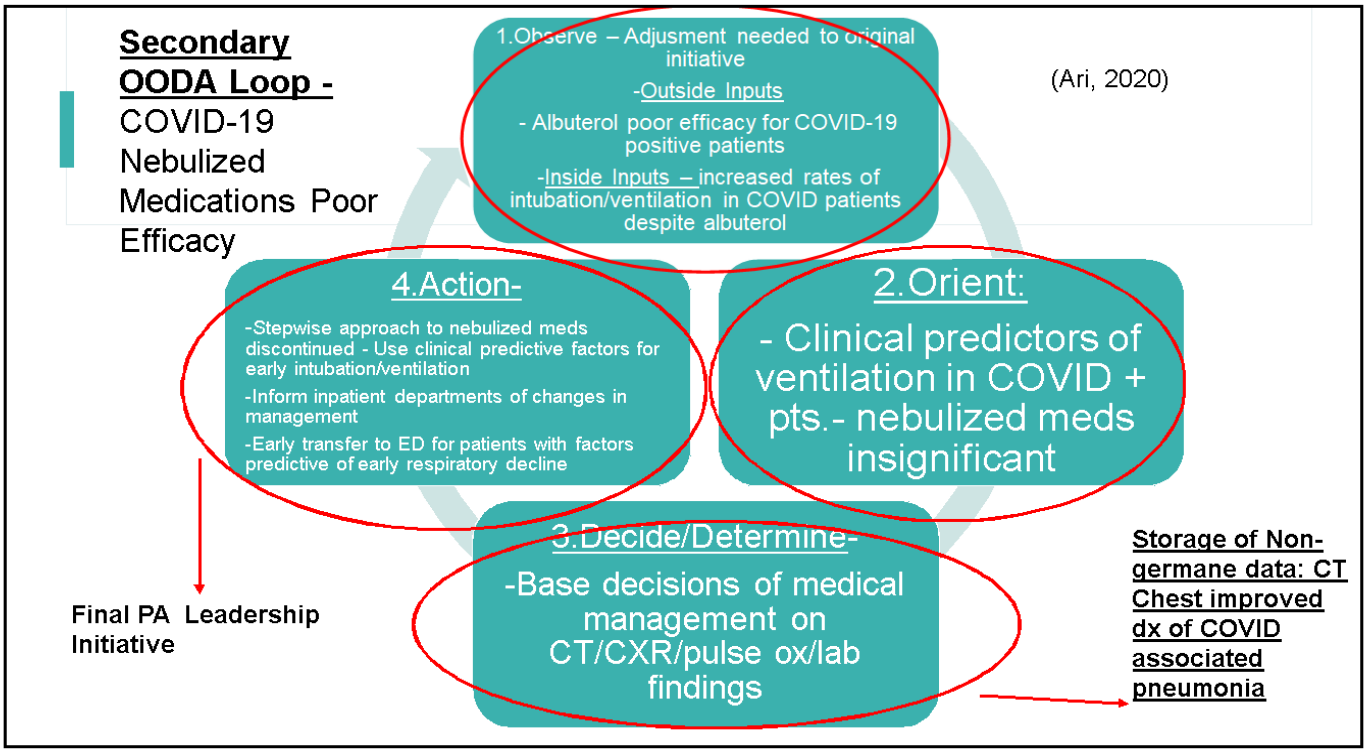
- Aerosol therapy mainstay treatment for respiratory diseases
- New Consideration:
  - Danger to caregivers/healthcare professional
- Potential for "fugitive emissions" during therapy
  - Generation of aerosols
  - Generation of droplets

} Source of potential respiratory pathogen (COVID-19)

OODA Application Example #1 - Novel COVID-19 and the Use of Nebulized Medications (Ari, 2020)

- How to Manage Change in Standard of Care?
  - Rapid appraisal of novel situation with OODA


Primary OODA Loop - COVID-19 and the Use of Nebulized Medications
(Ari, 2020)
1.Observe –
Outside Input - nebulized meds standard of care.
Inside Input- COVID cases on the rise in staff involved with respiratory care – especially nebulized tx
2. Orient-
Germane data on COVID –
-Expert reports of stepwise management based on patient severity
-Urgent care seeing lower acuity cases
3. Decide –
-Risk vs. benefit analysis of exposure or staff/tx gains in low risk patients
4.Action-
-Justification of discontinuing use of nebulized albuterol/ipratropium in UC
-Use of mesh/filters in higher acuity cases – communication with colleagues
-Improved UC staff illness rates, improved clarification of transfer to level of higher care
Final PA Leadership Initiative
Storage of Non-germane data: Albuterol poor efficacy for COVID-19 + patients


Secondary OODA Loop - COVID-19 Nebulized Medications Poor Efficacy
1.Observe – Adjusment needed to original initiative
-Outside Inputs
- Albuterol poor efficacy for COVID-19 positive patients
-Inside Inputs – increased rates of intubation/ventilation in COVID patients despite albuterol
(Ari, 2020)
2.Orient:
- Clinical predictors of ventilation in COVID + pts.- nebulized meds insignificant
3.Decide/Determine-
-Base decisions of medical management on CT/CXR/pulse ox/lab findings
4.Action-
-Stepwise approach to nebulized meds discontinued - Use clinical predictive factors for early intubation/ventilation
-Inform inpatient departments of changes in management
-Early transfer to ED for patients with factors predictive of early respiratory decline
Final PA Leadership Initiative
Storage of Non-germane data: CT Chest improved dx of COVID associated pneumonia

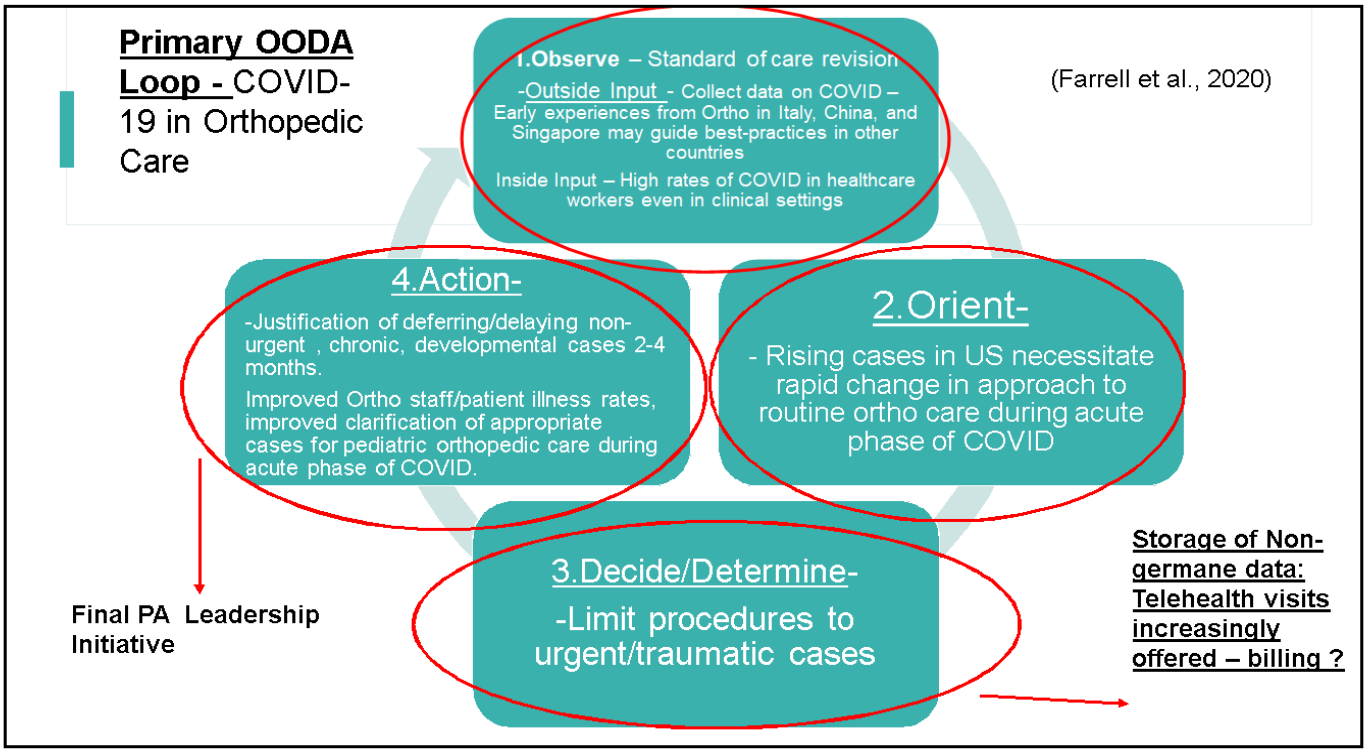
OODA Application Example #2
- Novel COVID-19 and the Provision of Pediatric Orthopedic Care (Farrell et al., 2020)

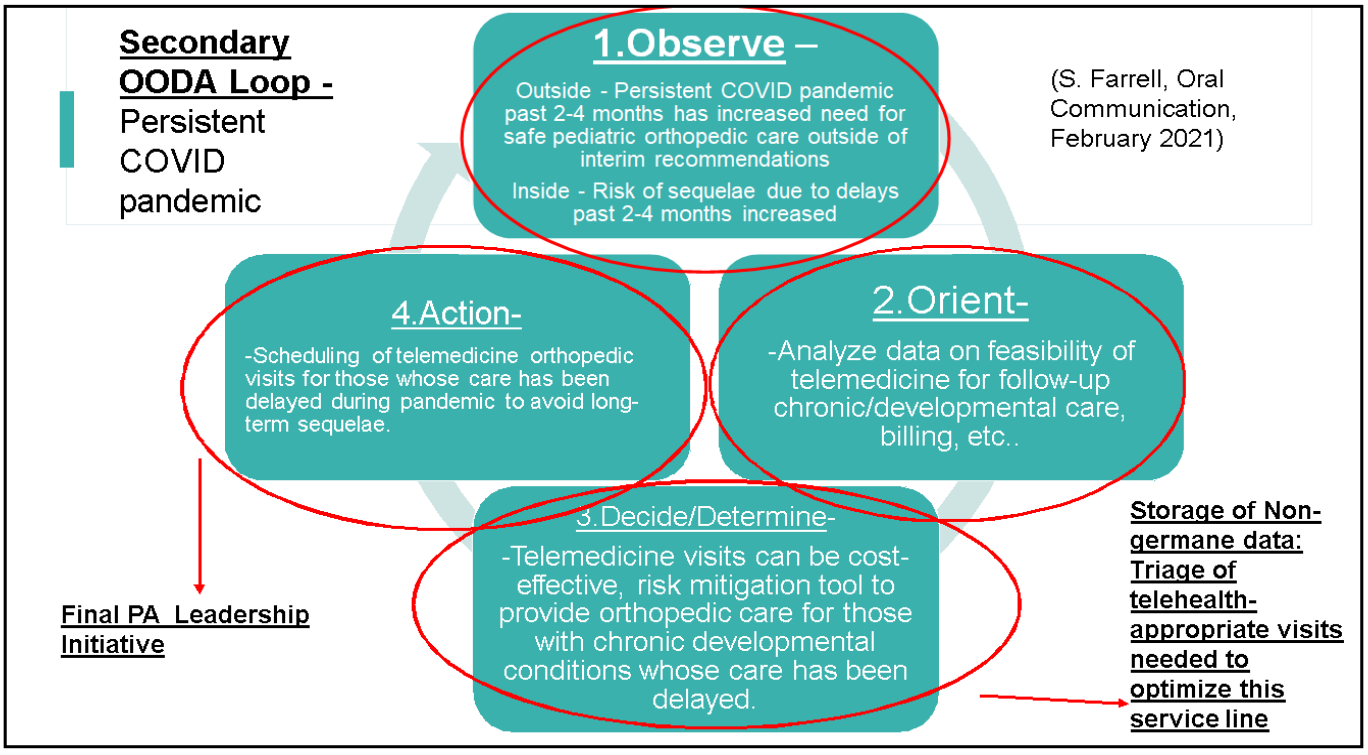
- COVID exposure risk to patients, families, and healthcare workers is present in the specialty setting
- New Consideration:
  - Danger of viral transmission to patients/caregivers/healthcare professionals may outweigh benefits of providing non-emergent pediatric orthopedic care
- Must determine protocol for appropriate cases where for orthopedic care during COVID pandemic
  - Traumatic injuries
  - Non-Operative methods

} Different risk vs. benefit ratio of potential exposure to respiratory pathogens (COVID-19)

OODA Application Example #2 - Novel COVID-19 and Routine Pediatric Orthopedic Care (Farrell et al., 2020)

- How to Manage Change in Standard of Care?
  - Rapid appraisal of novel situation with OODA


Primary OODA Loop - COVID-19 in Orthopedic Care
(Farrell et al., 2020)
1.Observe – Standard of care revision
-Outside Input - Collect data on COVID – Early experiences from Ortho in Italy, China, and Singapore may guide best-practices in other countries
Inside Input – High rates of COVID in healthcare workers even in clinical settings
2.Orient-
- Rising cases in US necessitate rapid change in approach to routine ortho care during acute phase of COVID
3.Decide/Determine-
-Limit procedures to urgent/traumatic cases
4.Action-
-Justification of deferring/delaying non-urgent , chronic, developmental cases 2-4 months.
Improved Ortho staff/patient illness rates, improved clarification of appropriate cases for pediatric orthopedic care during acute phase of COVID.
Final PA Leadership Initiative
Storage of Non-germane data: Telehealth visits increasingly offered – billing ?

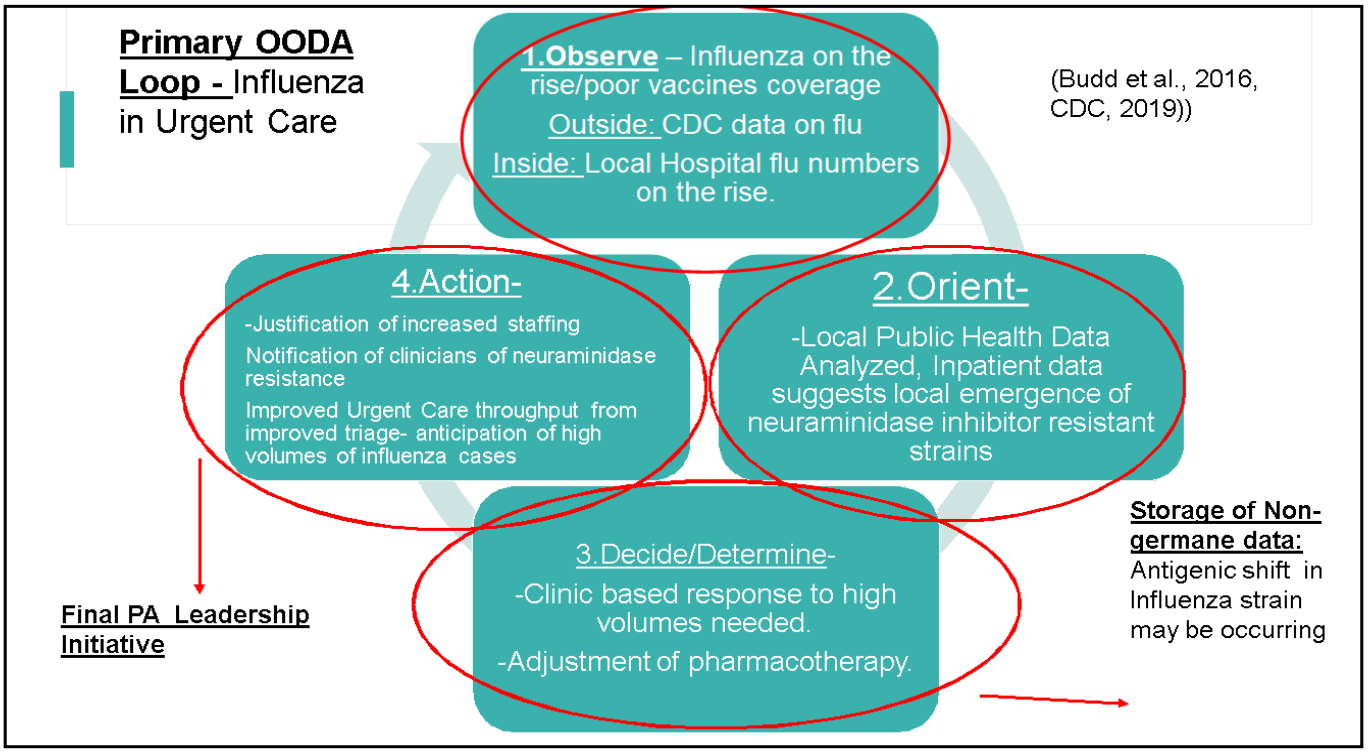

Secondary OODA Loop - Persistent COVID pandemic
1.Observe –
Outside - Persistent COVID pandemic past 2-4 months has increased need for safe pediatric orthopedic care outside of interim recommendations
Inside - Risk of sequelae due to delays past 2-4 months increased
(S. Farrell, Oral Communication, February 2021)
2.Orient-
-Analyze data on feasibility of telemedicine for follow-up chronic/developmental care, billing, etc..
3.Decide/Determine-
-Telemedicine visits can be cost-effective, risk mitigation tool to provide orthopedic care for those with chronic developmental conditions whose care has been delayed.
4.Action-
-Scheduling of telemedicine orthopedic visits for those whose care has been delayed during pandemic to avoid long-term sequelae.
Final PA Leadership Initiative
Storage of Non-germane data: Triage of telehealth-appropriate visits needed to optimize this service line

OODA Application Example #3 – Seasonal Influenza Virus (Fitzgerald et al., 2017, Hibberd, 2018)

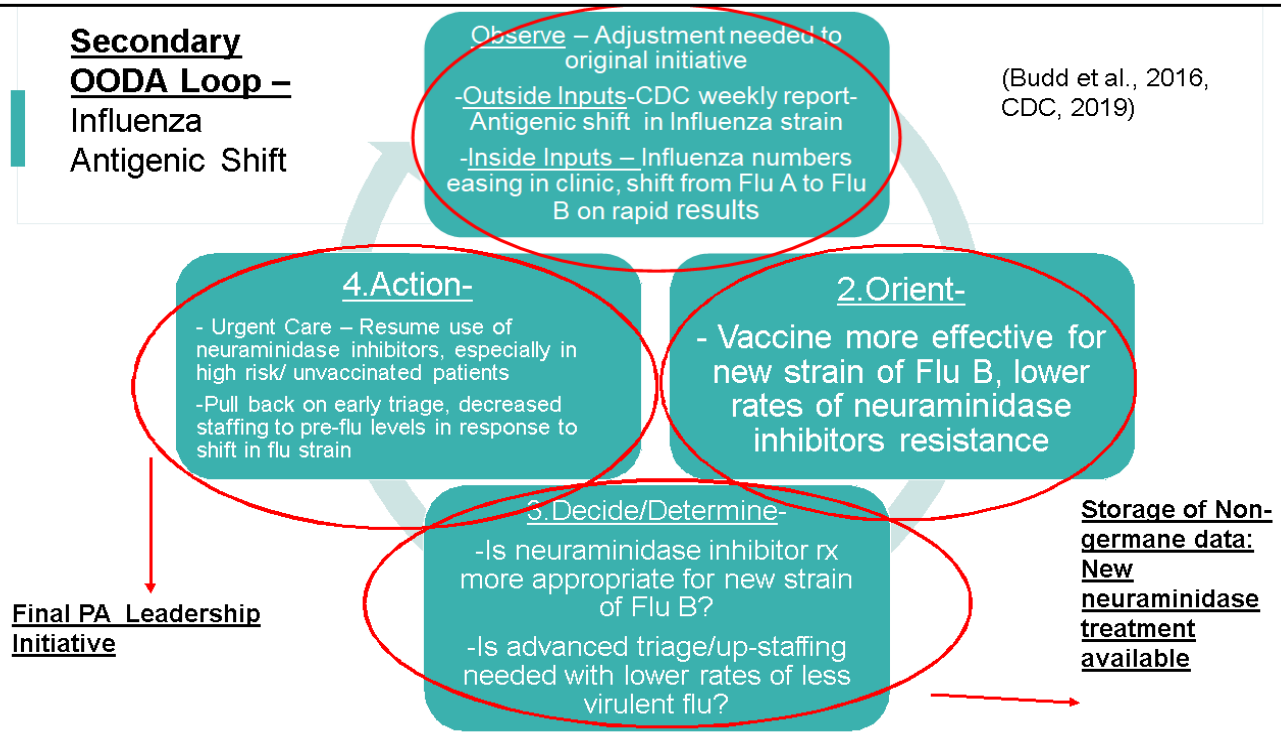
- Significant Public Health Risk US and abroad
  - Yearly seasonal appearance
  - Resistance to treatment
    - High rates of antigenic mutation
  - Timing/selection of influenza vaccination

OODA Application Example #3 – Seasonal Influenza Virus (Budd et al., 2016, CDC, 2019)

- Despite yearly CDC and WHO surveillance:
  - Significant morbidity/mortality (2018-2019 Outbreak)
    - 37.4 million illnesses
    - 531,000 hospitalizations
    - 36,400 deaths
  - Similar disease burden in 2016-2017 and 2017-2018 seasons
    - Suboptimal vaccine selection


Primary OODA Loop - Influenza in Urgent Care
1.Observe – Influenza on the rise/poor vaccines coverage
Outside: CDC data on flu
Inside: Local Hospital flu numbers on the rise.
(Budd et al., 2016, CDC, 2019))
2.Orient-
-Local Public Health Data Analyzed, Inpatient data suggests local emergence of neuraminidase inhibitor resistant strains
3.Decide/Determine-
-Clinic based response to high volumes needed.
-Adjustment of pharmacotherapy.
4.Action-
-Justification of increased staffing
Notification of clinicians of neuraminidase resistance
Improved Urgent Care throughput from improved triage- anticipation of high volumes of influenza cases
Final PA Leadership Initiative
Storage of Non-germane data:
Antigenic shift in Influenza strain may be occurring

Secondary OODA Loop – Influenza Antigenic Shift



(Budd et al., 2016, CDC, 2019)

Final PA Leadership Initiative

Storage of Non-germane data: New neuraminidase treatment available

How Utilizing OODA Work for You?

- Clinic / ED / Hospital-based issues:
  - Wait Times / Throughput
  - Staffing – "surge" protocol
  - Determining Access to Limited Resources
  - Compensation / Billing
  - PA Utilization
  - ???

Take Home Points

- PAs are increasingly placed in medical leadership roles.
- OODA provides a deliberate conceptual framework to outline medical leadership decision making.
- OODA is a customizable decision making tool to address and justify PA feedbacl regarding shifts in staffing, patient volume, standards of care, etc.
- OODA helps you collect, store, and reuse non-germane data in medical environments requiring dynamic leadership initiatives.
- OODA framework may also be useful for other applications: documentation during annual reviews, wage increases, or changes in scheduling.

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Questions / Comments / Tips

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