

## Primary Care Practice Habits in the Setting of COVID-19

### *Goals*

1. Reduce risk of transmission of infection to and from patients in the healthcare setting, including clinic and clinical support services, including labs and radiology
2. Reduce the risk of patient hospitalization for a non-COVID-19 medical problem

### *Principles*

- Morbidity and mortality of COVID is highest amongst the elderly and those with chronic medical conditions
- Transmissibility of COVID is unknown but possibly high, so protecting the high risk patient population warrants highly cautious measures with low risk patients

### *Suggestions*

#### **Postpone all routine testing**

We should aim to avoid cancer screening and routine lab draws. This would include surveillance of electrolytes for an ACE/ARB/thiazide, thyroid function tests, and lipids who are asymptomatic.

#### **Attempt to choose therapy that doesn't require monitoring**

The clearest example here is opting, when possible, for calcium channel blockers over ACE/ARB/thiazide options for hypertension.

#### **Increase empiric management**

Our normal practice habit may be to obtain testing to confirm a diagnosis whose pre-test probability is moderate or high based on the history. In this setting, we should treat empirically and have close follow-up. Examples include increasing diuretics for a CHF exacerbation, prescribing antibiotics a UTI or diverticulitis, and pain management +/- alpha blocker therapy for nephrolithiasis.

#### **For acute problems, order tests that will change management**

If the pre-test probability of a problem is unclear and the test will change management, or if worsening of the problem could eventually result in hospitalization, then testing, including an office visit for a physical exam, is likely justifiable. Examples include an office for exam of a new mass, a CBC for suspicions for symptomatic anemia or mild GI bleeding, an EKG and labs for unexplained syncope, and an X-ray for a suspected fracture. Notice that the bar for testing is pretty high.

#### **Opt for outpatient testing and home management over sending to the ED or admission, when possible**

When the acuity of the problem warrants a consideration for an ED evaluation or admission, we aim to limit use of these options wherever possible, both to decrease the risk of COVID to our patients and to preserve hospital resources for the sickest COVID and non-COVID patients. This involves partnering with patients to accept higher levels of risk with non-hospital management, for the benefit of these two personal and public health priorities.

## *Commentary*

Over the past week we have dramatically shifted how we deliver care, opting for a near-100% telehealth interface to achieve our primary goal of reducing COVID transmission. Our achievement of this goal carries with it a similarly significant practice change in how we manage patients, specifically in how we order tests, place referrals, and arrange follow-up. Our guiding principle in this setting is the secondary goal of avoiding hospitalization for non-COVID problems.

There is a natural tension between these two goals – reducing COVID transmission risk by minimizing interactions with the healthcare system and reducing the risk of hospitalization non-COVID reasons, which typically involves increased interaction with the healthcare system. All medical providers who have worked in an austere setting have experienced this tension. While in Afghanistan in 2009, a fellow Army internist had a Soldier with an ankle injury that met the Ottawa criteria. X-rays were available at a regional Combat Support Hospital. His team called a routine MEDEVAC to come get the Soldier. On the flight to their location, the helicopter crashed. Thankfully, no one died as a result, but it was terrifying to consider someone could have died in pursuit of managing a non-emergent medical condition.

This is the essence of the COVID-19 practice environment, of attempting to weigh the risk of COVID transmission and the risk of the clinical problem at hand. Of the suggestions on how we can change our health care delivery in this environment, the first three are relatively straightforward. The latter two, however, are much more complicated and require us to attempt to assess the multitude of factors present in weighing the risk of COVID and the risk of the clinical problem.

### *Assessing the risk of COVID-19 exposure, and its impact on the patient and close contacts:*

- What is the projected incidence of COVID in our community today, based on recent test results and testing availability? This number will continue to increase, possibly exponentially, in the coming weeks, which will make the risk of getting a test higher as time passes. Still, determining this risk during the process of obtaining testing is approximate at best.
- What is the risk of COVID exposure at the proposed test or intervention site? This is also a guess, however, we may consider the ED and medical center to be high risk and outlying facilities for a clinic visit, labs, or x-ray to be low-moderate risk.
- Is the patient or a close contact at high risk of a poor outcome due to COVID-19 infection?

### *Assessing the risk of the clinical problem:*

- What is the pre-test probability of a high risk diagnosis? We define high risk as a disease that could result in hospitalization or death if not appropriately managed.
- What is the post-test probability of the high risk diagnosis, if the test is positive? In other words, will the outcome of the test sufficiently alter the pre-test probability to make the test justifiable?

The determination of pre- and post-test probabilities is a nebulous process, a difficult-to-define combination of epidemiologic data, past experience, and understanding of how history and testing impacts likelihood ratios. Clinical decision tools can be exceptionally helpful here. Here are some: MDCalc app, <https://www.thennt.com/>, *Evidence-Based Physical Diagnosis* by Dr Steven McGee, and *The Patient History: Evidence Based Approach* by Drs Lawrence Tierney and Mark Henderson.

The process of attempting to weigh the risk of COVID exposure against the risk of the clinical problem at hand can be an exceptionally difficult one. As mentioned above, weighing the relevant factors of each these risks is approximate at best. Thankfully, there are some additional steps we can take to reduce the risk all around:

- if testing is warranted, encourage the patient to obtain it, if feasible, at a lower risk facility, such as an outlying clinic instead of the medical center

- order sequential testing - obtaining tests for the most likely or worrisome diagnoses first, then conducting follow-up testing, if needed, based on the evolving clinical circumstances; for example, obtaining labs and initial basic imaging first, especially if possible to do at a single location, followed by advanced imaging at a later date

- conduct close tele-health follow-up to monitor progress

Most importantly, we can and should conduct this risk analysis in full partnership with patients, getting their perspectives on where they're willing to accept risk, and determining how to proceed together

---

A recorded audio discussion between Dr. Shawn Corcoran, Dr. Avi Cooper, Dr. Marty Fried and Dr. Christopher Chiu about this document can be found [here](#).