Yale Medicine | Yale NewHaven Health

YNHHS recommendations on ambulatory prescribing of medications with possible efficacy against COVID

Situation: Guidance on the outpatient prescribing of medications with possible activity against COVID-19 is required.

Background: There are currently no FDA approved medications for treatment of COVID-19; but several readily available oral medications have demonstrated possible activity against SARS CoV-2 including hydroxychloroquine, HIV-1 protease inhibitors (e.g., lopinavir-ritonavir, atazanavir, tipranavir), and azithromycin.

None of these agents have been studied in large clinical trials (with or without placebo) to support their off label use in the <u>ambulatory</u> setting for the treatment/prevention of COVID 19 patients.

Assessment:
The use of these "re-purposed" medications in the outpatient setting is inappropriate, and will result in shortages, which will impact treatment of patients for whom these medications are indicated by FDA approval, established clinical experience, or for the severely ill inpatients with COVID-19.

Outpatient prescribing of hydroxychloroquine, HIV-1 protease inhibitors, and azithromycin should be reserved **ONLY** for patients who have medical conditions where their use has been established and there are no other alternatives.

Recommendation as of March 23, 2020:

The prescribing of the outpatient medications should be limited as follows:

1. Hydroxychloroquine:
    - Rheumatoid arthritis
    - Systemic Lupus Erythematosus (SLE) & other collagen vascular diseases when appropriate
    - Dermatologic manifestations of collagen vascular diseases (e.g., discoid lupus, dermatomyositis, etc.)
2. HIV-1 Protease Inhibitors:
    - ART for patients with HIV-1 infection

3. Azithromycin:
    - Community Acquired Pneumonia (CAP) in pregnancy or in children < 8 years of age (as doxycycline should be avoided in both groups).
    - CAP therapy for patients who are allergic/intolerant to the following alternative options:
4. Cefuroxime + doxycycline, levofloxacin, moxifloxacin
    - Treatment of Group A pharyngitis in patients who are allergic to beta-lactams (allergic to penicillins and cephalosporins) and clindamycin
    - Treatment of *Chlamydia trachomatis* infection
    - Prophylaxis in COPD patients at risk for frequent exacerbations
    - Prophylaxis in cystic fibrosis patients
    - Treatment of non-tuberculous mycobacterial infections (e.g., MAC or MAI)
    - Treatment / Prevention of Chronic Allograft Dysfunction S/P lung transplant
    - Treatment of Bronchiolitis Obliterans Syndrome (BOS) in Patients S/P Allogenic Stem Cell Transplant

There may be additional indications for the use of these agents in other disease(s), but based upon the available evidence, the use of these agents for the treatment or prevention of COVID-19 patients is not appropriate.

We realize patients may be scared or confused given COVID-19 and the media reports of possible therapeutic efficacy of these drugs, but it is our duty to help guide our patients to the best of our ability during this challenging time.

Epic Optimization update as of May 14, 2020

Situation:
Update to Epic optimizations for outpatient prescribing of hydroxychloroquine and azithromycin.

Background:
Increased utilization of hydroxychloroquine and azithromycin for the inpatient treatment of COVID-19 resulted in supply shortages of these drugs for outpatients who received this medication chronically. To promote the appropriate prescribing of hydroxychloroquine and azithromycin, a combination of clinical decision support tools were implemented in Epic ordering screens in April 2019:

- An advisory alert outlining restrictions on treatment indications
- A maximum limit of 30 days supplied per fill
- A required diagnosis code on the prescription

Assessment:
Stabilized supply of hydroxychloroquine and azithromycin in the community setting warrants an evaluation of the Epic prescribing restrictions.

Recommendations:
Based on the current drug supply in the inpatient and community settings, the following changes will be made to the Epic ordering screens for hydroxychloroquine and azithromycin, **effective May 14, 2020**:

- Removal of the advisory alert outlining restrictions on treatment indication
- Removal of maximum limit on days supplied per fill

The associated diagnosis code will remain a requirement for prescribing these medications.

Reviewed by the following stakeholders:

Infectious Diseases:

- J. Topal, MD for the YNHHS COVID-19 Treatment Team & YNHHS Antimicrobial Stewardship Committee

Outpatient Internal Medicine:

- K. Brown, MD for the YNHHS COVID-19 Ambulatory Task Force

Rheumatology:

- V. Chowdhary, MD, Yale School of Medicine