

NEWSLETTER

대한결핵 및 호흡기학회, 학술위원회

1. COVID-19 현황

출처: http://ncov.mohw.go.kr/bdBoardList_Real.do

1) 통계 (2020년 4월 27일 기준, 질병관리본부 자료)

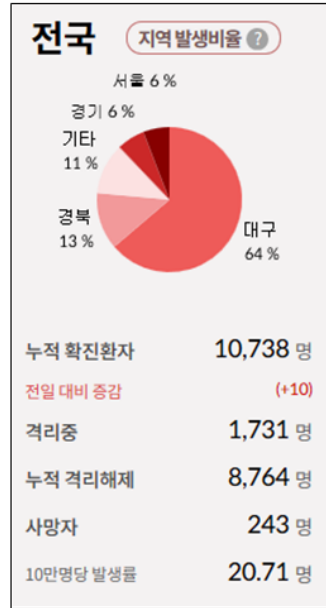
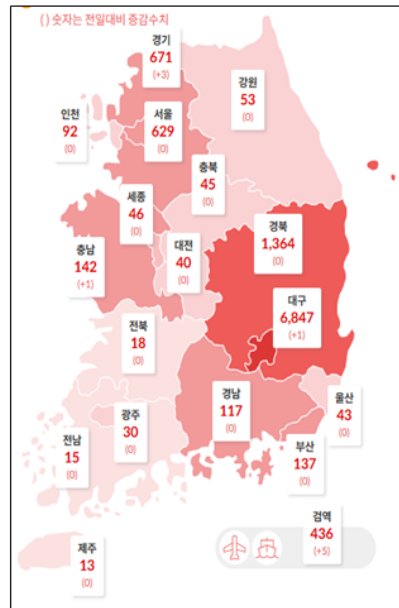
- 질병관리본부 중앙방역대책본부(본부장 정은경)는 4월 27일 0시 현재, 총 누적 확진자수는 10,738명(해외유입 1,044명(내국인 91.3%))이며, 이 중 8,764명(81.6%)이 격리해제 되었다고 밝혔다. 신규 확진자는 10명이고, 격리해제는 47명 증가하여 전체적으로 격리 중 환자는 감소하였다.

< 국내 신고 및 검사 현황 >

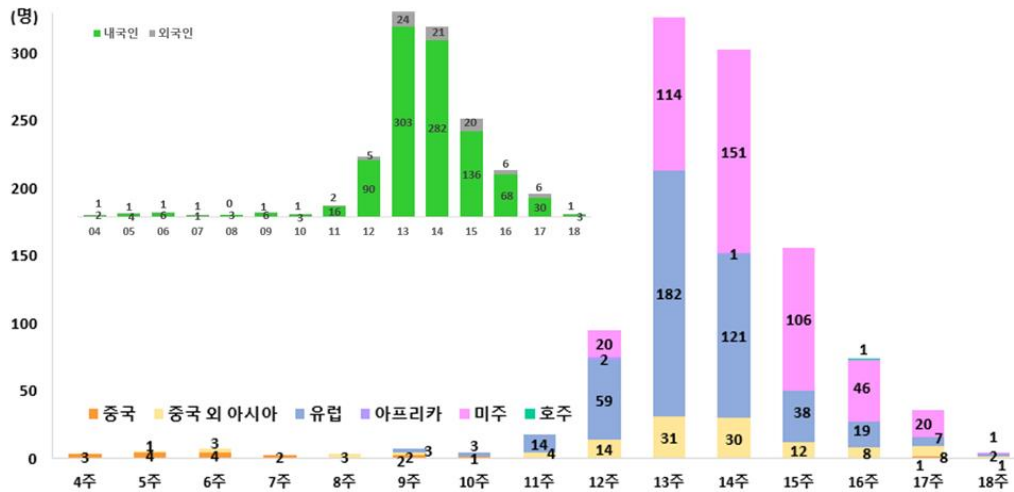
지역	확진환자수	(%)	인구10만명당 발생률*	지역	확진환자수	(%)	인구10만명당 발생률*
서울	629	(5.86)	6.46	경기	671	(6.25)	5.06
부산	137	(1.28)	4.02	강원	53	(0.49)	3.44
대구	6,847	(63.76)	281.02	충북	45	(0.42)	2.81
인천	92	(0.86)	3.11	충남	142	(1.32)	6.69
광주	30	(0.28)	2.06	전북	18	(0.17)	0.99
대전	40	(0.37)	2.71	전남	15	(0.14)	0.80
울산	43	(0.40)	3.75	경북	1,364	(12.70)	51.23
세종	46	(0.43)	13.44	경남	117	(1.09)	3.48
검역	436	(4.06)	-	제주	13	(0.12)	1.94
				총합계	10,738	(100)	20.71

* 지역별 1월 이후 누적 확진자수 / 지역별 인구('20.1월 행정안전부 주민등록인구현황 기준)

구분	총계	결과 양성				검사 중	결과 음성
		확진자	격리해제	격리 중	사망		
4. 26.(일) 0시 기준	598,285	10,728	8,717	1,769	242	8,999	578,558
4. 27.(월) 0시 기준	601,660	10,738	8,764	1,731	243	8,895	582,027
변동	(+)3,375	(+)10	(+)47	(-)38	(+)1	(-)104	(+)3,469



< 국내 확진자 중 해외 유입 사례 >



확진자수(명)		여행국
중국	17	-
중국외아시아	117	필리핀, 태국, 인도네시아, 일본, 싱가포르, 말레이시아, 이란, 베트남, 아랍에미리트, 팔라우, 카타르, 터키, 인도 등
유럽	448	영국, 스페인, 프랑스, 이탈리아, 아일랜드, 체코, 독일, 스위스, 포르투갈, 폴란드, 헝가리, 오스트리아, 네덜란드, 크로아티아, 에스토니아, 핀란드, 그리스, 러시아 등
아프리카	3	이집트, 남아공·나미비아·짐바브웨
미주	458	미국, 캐나다, 브라질, 아르헨티나, 멕시코, 페루, 콜롬비아, 칠레, 볼리비아, 우루과이 등
호주	1	호주

* 신고 기간(주)는 의사환자 신고 일자(주) 기준으로 확진신고 일자와 차이가 있음

2. COVID-19 guideline review

(1) ATS guideline

Source: <https://www.thoracic.org/covid/covid-19-guidance.pdf>

ATS는 COVID-19 감염이 심각해짐에 따라 ATS member를 중심으로 하여 international Task Force를 구성하여 guideline을 작성하였다. 그 첫번째 결과를 ATS homepage에 upload 하였다. COVID-19 management에 대한 evidence가 매우 부족한 실정이나, 이미 치료가 시급한 수많은 환자들이 있어 evidence가 다소 부족하더라도 guideline을 급히 release해야 하였다. 저자들은 기존에 발표된 evidence를 share 한 후 expert 들에게 각 항목에 대한 recommendation 강도를 Convergence of Opinion on Recommendations and Evidence (CORE) process를 통하여 정하였다. 그 주요 내용은 다음과 같다.

Table- Interim Guidance on Management of COVID-19

Suggestions for	Vote from CORE process (>70% agreement to make suggestion)
For any COVID-19 patient who receives an intervention suggested in this document, data should be collected in a manner that enables studies that use valid methods for causal inference and control of confounders. The data should be assessed periodically so that patients who received the intervention can be compared those who did not receive the intervention. Management should be modified as-needed based upon the comparisons.	No vote
Hydroxychloroquine (HCQ) or chloroquine (CQ) for patients with confirmed COVID-19 and severe pneumonia if: <ul style="list-style-type: none"> • Shared decision-making is utilized, and • Data is collected for research comparing HCQ to no HCQ, or CQ to no CQ, and • Illness is severe enough to warrant investigational therapy, and • HCQ or CQ are not in short supply. 	73% for HCQ or CQ 16% no suggestion 11% against HCQ or CQ
Prone ventilation for patients with refractory hypoxemia due to progressive COVID-19 pneumonia (i.e., ARDS)	99% for prone ventilation 1% no suggestion 0% against prone ventilation
Consideration of ECMO for patients with refractory hypoxemia due to progressive COVID-19 pneumonia (i.e., ARDS) who have failed prone ventilation	75% for ECMO 23% no suggestion 1% against ECMO
No suggestion for or against	
HCQ or CQ for outpatient COVID-19 patients	18% for HCQ or CQ 36% no suggestion 46% against HCQ or CQ
HCQ or CQ for hospitalized COVID-19 patients without pneumonia	8% for HCQ or CQ 50% no suggestion 42% against HCQ or CQ
Remdesivir for hospitalized COVID-19 patients with pneumonia	68% for remdesivir 26% no suggestion 5% against remdesivir
Lopinavir-ritonavir for hospitalized COVID-19 patients with pneumonia	30% for lopinavir-ritonavir 26% no suggestion 43% against lopinavir-ritonavir
Tocilizumab for hospitalized COVID-19 patients with pneumonia	30% for tocilizumab 56% no suggestion 14% against tocilizumab
Systemic corticosteroids for hospitalized COVID-19 patients with pneumonia	15% for intervention 18% no suggestion 67% against intervention

CORE= Convergence of Opinion on Recommendations and Evidence; ARDS= Acute Respiratory Distress Syndrome; ECMO= Extracorporeal Membrane Oxygenation

(2) IDSA guideline

Source: <https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management>

IDSA는 infectious disease clinician, pharmacist, methodologist 전문가들로 구성된 다학제 guideline panel을 구성하였다. Panel들에 의해 우선적인 PICO가 결정되었고, systematic review와 GRADE approach를 통해 recommendation을 제정하였다. 그 주요 내용은 다음과 같다.

- **Recommendation 1.** Among patients who have been admitted to the hospital with COVID-19, the IDSA guideline panel recommends hydroxychloroquine/chloroquine in the context of a clinical trial. (Knowledge gap)
- **Recommendation 2.** Among patients who have been admitted to the hospital with COVID-19, the IDSA guideline panel recommends hydroxychloroquine/chloroquine plus azithromycin only in the context of a clinical trial. (Knowledge gap)
- **Recommendation 3.** Among patients who have been admitted to the hospital with COVID-19, the IDSA guideline panel recommends the combination of lopinavir/ritonavir only in the context of a clinical trial. (Knowledge gap)
- **Recommendation 4.** Among patients who have been admitted to the hospital with COVID-19 pneumonia, the IDSA guideline panel suggests against the use of corticosteroids. (Conditional recommendation, very low certainty of evidence)
- **Recommendation 5.** Among patients who have been admitted to the hospital with ARDS due to COVID-19, the IDSA guideline panel recommends the use of corticosteroids in the context of a clinical trial. (Knowledge gap)
- **Recommendation 6.** Among patients who have been admitted to the hospital with COVID-19, the IDSA guideline panel recommends tocilizumab only in the context of a clinical trial. (Knowledge gap)
- **Recommendation 7.** Among patients who have been admitted to the hospital with COVID-19, the IDSA guideline panel recommends COVID-19 convalescent plasma in the context of a clinical trial. (Knowledge gap)

(3) NIH guideline

Source: <https://covid19treatmentguidelines.nih.gov>

본 guideline의 recommendation은 scientific evidence와 expert opinion에 기반하여 작성되었다. American College of Chest Physicians, American College of Emergency Physicians, American Thoracic Society, Biomedical Advanced Research and Development Authority, Centers for Disease Control and Prevention, Department of Defense, Department of Veterans Affairs, Food and Drug Administration, Infectious Diseases Society of America, National Institutes of Health, Pediatric Infectious Diseases Society, Society of Critical Care Medicine, Society of Infectious Diseases Pharmacists 학회로부터 전문가를 추천 받아 panel을 구성 하였다. Recommendation 강도와 evidence quality는 다음과 같다.

Strength of Recommendation	Quality of Evidence for Recommendation
<p>A: Strong recommendation for the statement</p> <p>B: Moderate recommendation for the statement</p> <p>C: Optional recommendation for the statement</p>	<p>I: One or more randomized trials with clinical outcomes and/or validated laboratory endpoints</p> <p>II: One or more well-designed, nonrandomized trials or observational cohort studies</p> <p>III: Expert opinion</p>

권고 내용은 다음과 같다.

Antivirals:

- There are insufficient clinical data to recommend either for or against using **chloroquine** or **hydroxychloroquine** for the treatment of COVID-19 (**AIII**).
 - If chloroquine or hydroxychloroquine is used, clinicians should monitor the patient for adverse effects, especially prolonged QTc interval (**AIII**).
- There are insufficient clinical data to recommend either for or against using the investigational antiviral drug **remdesivir** for the treatment of COVID-19 (**AIII**).
 - Remdesivir as a treatment for COVID-19 is currently being investigated in clinical trials and is also available through expanded access and compassionate use mechanisms for certain patient populations.
- Except in the context of a clinical trial, the COVID-19 Treatment Guidelines Panel (the Panel) **recommends against** the use of the following drugs for the treatment of COVID-19:
 - The combination of **hydroxychloroquine plus azithromycin (AIII)** because of the potential for toxicities.
 - **Lopinavir/ritonavir (AI)** or other **HIV protease inhibitors (AIII)** because of unfavorable pharmacodynamics and negative clinical trial data.

Host Modifiers/Immune-Based Therapy:

- There are insufficient clinical data to recommend either for or against the use of **convalescent plasma** or **hyperimmune immunoglobulin** for the treatment of COVID-19 (**AIII**).
- There are insufficient clinical data to recommend either for or against the use of the following agents for the treatment of COVID-19 (**AIII**):
 - **Interleukin-6 inhibitors** (e.g., sarilumab, siltuximab, tocilizumab)
 - **Interleukin-1 inhibitors** (e.g., anakinra)
- Except in the context of a clinical trial, the Panel **recommends against** the use of other immunomodulators, such as:
 - **Interferons (AIII)**, because of lack of efficacy in treatment of severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) and toxicity.
 - **Janus kinase inhibitors** (e.g., baricitinib) (**AIII**), because of their broad immunosuppressive effect.

Angiotensin-Converting Enzyme (ACE) Inhibitors and Angiotensin Receptor Blockers (ARBs):

- Persons with COVID-19 who are prescribed ACE inhibitors or ARBs for cardiovascular disease (or other indications) should continue these medications (**AIII**).
- The COVID-19 Treatment Guidelines Panel (the Panel) **recommends against** the use of ACE inhibitors or ARBs for the treatment of COVID-19 outside of the setting of a clinical trial (**AIII**).

Corticosteroids

For Critically Ill Patients with COVID-19:

- The Panel **recommends against** the routine use of systemic corticosteroids for the treatment of mechanically ventilated patients with COVID-19 without acute respiratory distress syndrome (ARDS) (**AIII**).
- For mechanically ventilated patients with ARDS, there is insufficient evidence to recommend for or against the use of systemic corticosteroids (**CI**).
- For adults with COVID-19 and refractory shock, the Panel recommends using low-dose corticosteroid therapy (i.e., shock reversal) over no corticosteroids (**BII**).

For Hospitalized, Non-Critically Ill Patients with COVID-19:

- The Panel **recommends against** the routine use of systemic corticosteroids for the treatment of COVID-19 in hospitalized patients, unless they are in the intensive care unit (**AIII**).

HMG-CoA Reductase Inhibitors (Statins):

- Persons with COVID-19 who are prescribed statin therapy for the treatment or prevention of cardiovascular disease should continue these medications **(AIII)**.
- The Panel **recommends against** the use of statins for the treatment of COVID-19 outside of the setting of a clinical trial **(AIII)**.

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs):

- Persons with COVID-19 who are taking NSAIDs for a co-morbid condition should continue therapy as previously directed by their physician **(AIII)**.
- The Panel recommends that there be no difference in the use of antipyretic strategies (e.g., with acetaminophen or NSAIDs) between patients with or without COVID-19 **(AIII)**.

- 정리 작성 : 서울성모병원 내과 이진국 교수