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COMMENTARY

Physician Executives Guide a Successful Covid-19 Response in Colorado

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Colorado witnessed exponential growth of Covid-19 cases beginning in March 2020. As the number of acute hospitalizations increased, seven Colorado Health systems came together through their Chief Medical Officers and Chief Clinical Officers to form a working group for the purpose of mounting a collaborative response to Covid-19. A representative from the Colorado Hospital Association was also invited. Between March and July 2020, the seven Colorado health systems cared for 6,329 (98%) of the 6,441 hospitalized patients in the state. The unique collaboration, which involved the sharing of best practices and scarce resources as well as advocating for policy to optimally address the pandemic, ultimately allowed our state to rapidly de-escalate the rates of infection, hospitalization, and mortality due to Covid-19. We share the lessons learned about the elements of this unique collaboration that allowed our state to successfully weather the first wave of the Covid-19 pandemic.

Background

As those of us in Colorado watched our neighbors in Washington state struggle with the ravages of Covid-19 in their communities and hospitals, the need for a statewide, coordinated response became evident. The Colorado Department of Public Health and Environment (CDPHE), along with the Division of Homeland Security and Emergency Management, established our State Emergency Operations Center (SEOC) under a unified command by both agencies. The chief medical/clinical officers (CMOs) of seven Colorado hospitals and health systems realized that Covid-19 was bigger than one doctor, one hospital, or even one health system and determined that collaboration rather than competition would provide optimal care for Coloradans. The collective goal was to bring the major health systems together to identify issues, share best practices, align on

difficult decisions, and provide guidance when there was either no guidance or rapidly changing guidance on how to address these unprecedented challenges.

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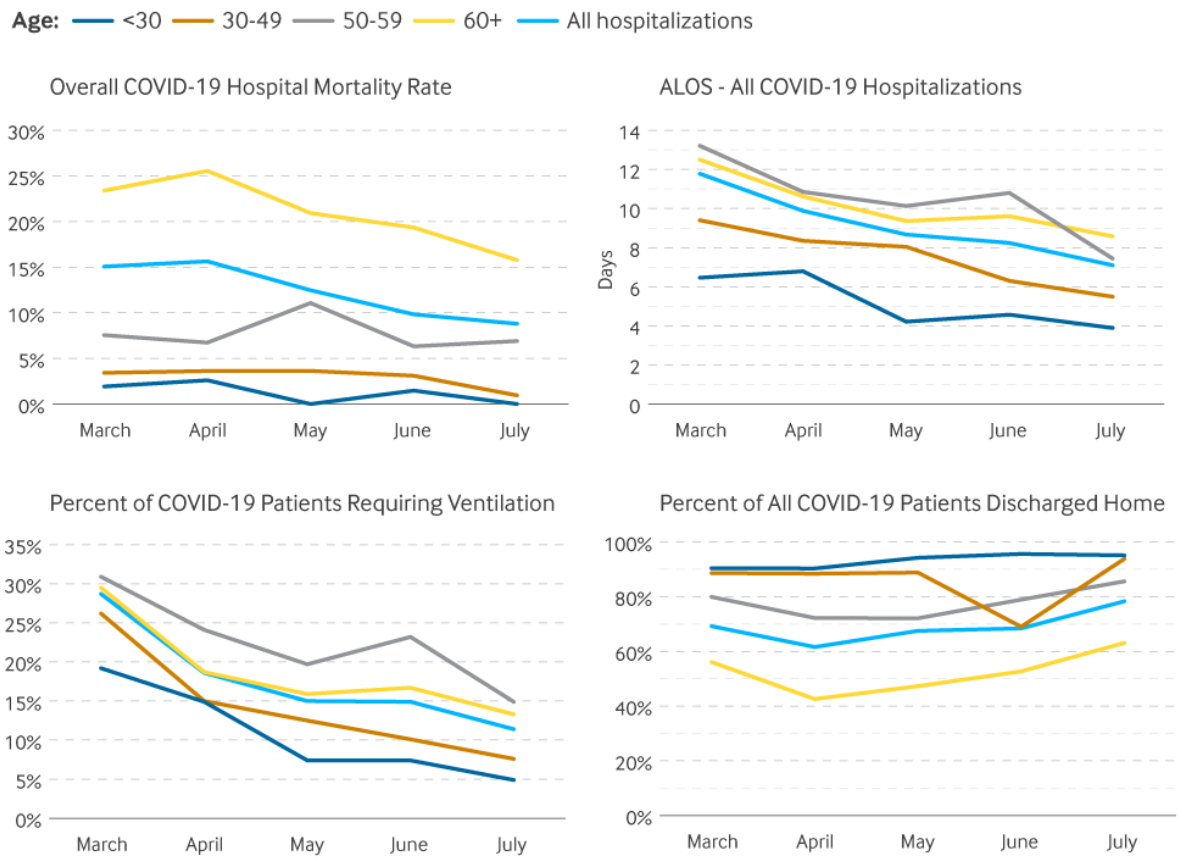
The group met virtually for an hour each weekday morning to troubleshoot the shared challenges faced in our state and to establish or share best practices. While the group did not have a designated leader, one CMO acted as the primary facilitator of the meetings and an executive assistant coordinated meeting times, shared documents, and compiled materials. During these meetings, the group reviewed dashboards, documents, and slides in order to allow everyone to understand how each leader implemented various policies within their own organization. For example, the CMOs compared hospital visitation policies, which evolved as cases surged in our state. Limiting visitors to our hospitals proved to be a vital mechanism for protecting our workforce and patients from Covid-19 transmission and was a practice that all of our systems implemented concurrently. Our CMOs also learned from reviewing each other's dashboards for supplies, including personal protective equipment (PPE). Access to information such as burn rates, inventories, and expected deliveries allowed the group to predict impending supply or medication shortages based on where outbreaks occurred in our communities. Our SEOC incident commander began joining the calls once a week in late May, at which time the group began to space out their meetings to three times a week.

By Memorial Day, Colorado had weathered the first wave of the Covid-19 storm, with a smaller "peak" of Covid-19 infections compared with the rest of the county. As the state began to reopen, hospitals and physicians resumed performing delayed and much needed procedures and visits with patients. By the end of July, Colorado had 47,745 cases of Covid-19 and our hospitals could boast clinical outcomes for Covid-19 patients that were better than the national average, including lower overall mortality rates, lower average length of stay, and fewer patients requiring mechanical ventilation (Figure 1).[1,2] Additionally, the rates of patients discharged to home increased between March and August of 2020. Colorado emerged from the first wave of the pandemic relatively unscathed, due in no small measure to the unique leadership role played by the systems CMOs as a group. The group, which collectively cared for 6,329 (98%) of the 6,441 hospitalized Covid-19 patients in Colorado, successfully harnessed four "superpowers" to achieve this success: (1) perspective, (2) partnership, (3) patient advocacy, and (4) peer support.[3]

FIGURE1

Metrics Related to COVID-19 in Colorado Through July 2020

Line graphs showing the rates of mortality, average length of stay (ALOS), percentage of patients requiring ventilation, and percentage of patients discharged to home.



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Perspective

As physician executives, the CMOs simultaneously had a bird's eye view and a bedside view of events as the Covid-19 pandemic unfolded in Colorado. Given their training and experience in emergency medicine, anesthesiology, family, internal and hospital medicine, infectious diseases, and pediatrics, the members of the group had a deep understanding of the challenges that frontline physicians faced in the care of Covid-19 patients. Together, in caring for 6,329 hospitalized Covid-19 patients, the CMO group provided 60,188 patient-days of care, with 17,407 ventilators days.[3] The knowledge and experience derived from the collective years of clinical practice, along with firsthand experience of directly caring for acutely ill hospitalized Covid-19 patients in our hospitals during this first wave, provided irreplaceable expert insight as the CMOs contemplated the larger system and state-level challenges that needed to be addressed.[4] In

their roles as administrators and members of their incident command teams, each CMO also had access to real-time data about Covid-19 patients within their system, including emergency department visits, hospitalizations, intensive care needs, and mechanical ventilation. Furthermore, system-level dashboards provided insight into PPE burn rates, staffing shortages, redeployment and credentialing, and availability of space that could be converted into surge units. With this information, the CMOs could deftly navigate operational barriers that their hospitals and systems would need to address over the course of the next few weeks as they created or revised policies for visitation, infection control, use of PPE, Covid-19 testing, and planning for the management of patients through the continuum of care.

Partnership

The most significant aspect this collaboration was the ability to partner with critical stakeholders to inform policy, drive action, and influence key decisions. The group regularly engaged with the SEOC's incident commander and chief operating officer to communicate clinical trends and health system capabilities during the early Covid-19 wave. The CMOs effectively worked together to ensure that Colorado hospitals had sufficient resources, including staff, critical care medications, inpatient and intensive care unit (ICU) beds, PPE, and mechanical ventilators to provide care for the surge of 4,000 critically ill patients that was predicted for our state. Meeting this challenge involved sharing those resources across hospitals and systems as the "hotspots" of Covid-19 infection migrated across Colorado. The group's daily meeting facilitated rapid interhospital transfers of patients among health systems when one hospital or region became overwhelmed and allowed all hospitals to stay out of crisis standards of care because of the ability to share PPE and equipment among the group. As our state's leaders contemplated how and when to begin reopening, the CMOs provided critical feedback on proposals for the resumption of non-emergent surgical procedures. Another important product of the group was the creation of a streamlined system to facilitate efficient transfer of Covid-19 patients to an available bed regardless of hospital, system, or region in partnership with the state and the Colorado Hospital Association.

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Another vital partnership that the group established was with the Governor's Expert Emergency Epidemic Response Committee (GEEERC), which advised the CDPHE and Governor Polis on executive and public health orders to address the pandemic. The GEEERC provided counsel to CDPHE's Executive Director on the adoption of crisis standards of care for scarce resources, PPE, palliative care, and behavioral health. The CMO group actively participated in the discussions of executive orders in our state, accurately translating concerns raised by frontline clinicians to state and executive health leaders and vice-versa. In their capacity as trusted leaders and colleagues,

the CMOs were able to communicate critical information effectively and quickly to medical staff. This sped the seamless adoption of new or evolving guidelines for infection prevention, PPE conservation practices, and Colorado's "Stay-at-Home" orders. The "multilingual" ability of the CMO physician executives allowed them to effectively communicate complex, clinical concepts to a variety of lay audiences, and the rapid evolution of best practices in the Covid-19 response made this capability even more valuable.

Patient Advocacy

While practicing physicians are known for their altruistic choice of profession, it is less well-known that physician executives typically retain the same degree of altruism, believing that they can serve a greater "community purpose" in their leadership role than was possible in their physician role.[5] Indeed, the original impetus for CMO group was the desire to advocate for the well-being of our collective Colorado community, and this guiding principle was clearly reflected in the decisions and actions of the group. For example, as the number of Covid-19 patients admitted to our hospitals and intubated and ventilated in our ICUs increased, the fear of a shortage of resources, particularly ventilators and PPE, was very real. As a result, the CDPHE and GEEERC began the process of revising Colorado's crisis standards of care. The CMO group actively participated in the design of those standards and led the implementation of those plans within their systems, ensuring that all patients could access the same level of care, regardless of which hospital or system they visited. Throughout these discussions, the CMO group was steadfast in its defense of patients' rights to equitable, high-quality care, and, as the debate on how to allocate scarce resources escalated, the group consistently raised the themes of fairness and inclusivity.

Peer Support

Concerns about physician burnout and the need to maintain physician well-being has become a well-described phenomenon in recent years. Solutions such as forming communities to provide meaningful connectedness have been shown to be effective for promoting wellness for physicians.[6] Arguably, the role of the physician executive can be an isolated one as it is frequently a one-of-a-kind position on executive teams and is also outside the realm of the general physician community. The CMO group provided a unique gathering of peers in a way that did not previously exist for these physician leaders. With this shared perspective, the group dynamics proved to be collegial, supportive, and without conflict. Differences of opinion were voiced in a safe space, and the group frequently engaged in lively discussions to reach agreement on a course of action. Interestingly, as the group was formed in response to and during the time of the Covid-19 pandemic, the individuals have never actually met face-to-face. Yet they have played an integral supportive role in each other's professional lives for the past few months, with the group providing a haven in which members can commiserate about the challenges being faced and can share in the sadness of losing patients to Covid-19.

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Collaboration Beyond Covid-19

While the successful outcome of Colorado's Covid-19 response is surely due to the incredible care by the frontline caregivers and clinicians in our state, the CMO group certainly contributed to that success. Coming together as a unified health care collaborative enabled the group to see broadly across the state, to identify trends, and to react more quickly. Because the physician leaders worked together, resources could be rapidly deployed from one area of the state to another so that PPE, critical equipment, and staff could be reallocated to the areas that needed it most. Moreover, the frequent communication among the CMOs as well as with the SEOC incident commander and state leaders allowed the group to provide real-time input into emerging policy decisions on topics such as social distancing, masking, and re-opening. Even though the initial surge of Covid-19 has passed, the CMO group has maintained a thrice-weekly meeting schedule in recognition of the persistent risk of another surge. If future surges occur, the group has committed to resuming a more frequent meeting schedule. Continuing the collaboration has allowed the CMOs to provide counsel to the state on emerging topics such as vaccination and issues related to the future response to Covid-19. Coming together without hesitation sent the clear message that our hospitals and clinicians were 100% committed to the health of our patients, our communities, and our fellow Coloradans. Our state's response to Covid-19, and the people of Colorado, are better off because of it.

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References:

1. Lewnard JA, Liu VX, Jackson ML. Incidence, clinical outcomes, and transmission dynamics of severe coronavirus disease 2019 in California and Washington: prospective cohort study. BMJ.

2. Centers for Disease Control and Prevention. CDC Covid Data Tracker. CDC Covid Data Tracker. https://covid.cdc.gov/covid-data-tracker/#cases. Accessed 8/26/2020.

3. Valin J, Perkins K, Gulley S, et al. Covid Wave 1: March 1- May 31, 2020 Colorado Health Systems Experience. 2020. https://www.coloradohospitalcovid19.com/

4. Goodall AH. Physician-leaders and hospital performance: is there an association? Soc Sci Med. 2011;73(6):535-9

5. Quinn JF, Perelli S. First and foremost, physicians: the clinical versus leadership identities of physician leaders. J Health Organ Manag. 2016;30(6):711-28

6. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. J Intern Med. 2018;283(6):516-29