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Comment on: COVID-19 and Older Adults: What We Know

To the Editor: The conclusion by Shahid and colleagues may be misleading.¹ They suggest that older patients taking inhibitors of the renin-angiotensin-aldosterone system (RAAS) could be at greater risk of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection as well as of a worse outcome of COVID-19.

Results of available studies have not supported the hypothesis that patients treated with RAAS inhibitors, either angiotensin-converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs), are more susceptible to COVID-19.²⁻⁴ Furthermore, the outcome of COVID-19 is not worse in patients treated with either ACE inhibitors or ARBs compared with patients not taking RAAS inhibitors in terms of organ dysfunction, admission to the intensive care unit, need for mechanical ventilation, and death.²⁻⁴ Rather, the use of these drugs is associated with a lower probability of severe illness in patients with high-risk underlying conditions, such as diabetes mellitus, type II.² It is important to emphasize these points because COVID-19 patients have a background cardiovascular risk due to the high prevalence of coexisting conditions, such as hypertension, diabetes mellitus, type II, coronary heart disease, heart failure, and chronic kidney disease, for which ACE inhibitors and ARBs are a cornerstone of therapy, according to guidelines.⁵ Advancing age and the presence of comorbidities stand as independent adverse prognostic factors in COVID-19 patients rather than the exposure to RAAS inhibitors.²⁻⁵

Concern about the harmful effects of RAAS inhibitors in the setting of SARS-CoV-2 infection and COVID-19 has been raised by results, although conflicting, of experimental studies showing that RAAS inhibitors have the potential to upregulate the expression of ACE2.⁶ ACE2 is the major binding receptor for SARS-CoV-2 and is broadly expressed in human tissues, including in the lung alveolar epithelial cells and the respiratory tract (i.e., the main targets for SARS-CoV-2).^{7,8} This has been viewed to indirectly support the hypothesis that subjects taking RAAS inhibitors could be more susceptible to SARS-CoV-2 infection. However, on

the other hand, ACE2 is a counterregulatory enzyme that inactivates and degrades angiotensin II to angiotensin-1 (1-7), therefore attenuating the vasoconstriction, sodium retention, and pro-oxidant, proinflammatory, profibrotic, prothrombotic, and arrhythmogenic effects driven by angiotensin II.⁹ Furthermore, ACE2 is internalized and downregulated after SARS-CoV-2 infection, which could lead to unopposed angiotensin II effects and more severe inflammation and lung injury in COVID-19 patients.¹⁰ Not surprisingly, some experimental studies have highlighted a protective role of ACE2 in models of lung injury and the acute respiratory distress syndrome.⁶ In conclusion, under both a clinical and mechanistic point of view, there is no evidence in favor of an adverse effect of RAAS inhibitors, either ACE inhibitors or ARBs, in COVID-19 patients.

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Caring for Caregivers During COVID-19

To the Editor: Older adults are often dependent on informal caregivers who provide home-based assistance with personal care and household tasks, and with complex medical and

Table 1 Recommendations to Support Caregivers Using Examples from the VA

Recommendation	Guidance for Providers and Practices	Examples from VA
Identify high-risk patients and their caregivers, using a team approach and all available staff to reach out to them	<ul style="list-style-type: none"> • Develop a systematic approach based on age, historical information, clinical judgment, recent hospital discharge, or a risk stratification algorithm. • Tailor outreach and intervention to your local practice setting (e.g., multidisciplinary medical home vs standard provider practice) and resources (e.g., integrated system with access to dashboards and support staff vs practices with insufficient data and staff infrastructure and greater reliance on community resources). • Based on practice setting, use a team approach and all available staff (physicians, nurses, coordinators, social workers, pharmacists, psychologists, and front desk staff) to identify, screen, support, educate, coordinate care, and be available for high-risk patients and their caregivers. 	<p>VA primary care processes for identifying and supporting high-risk veterans: Primary care team members are contacting high-risk veterans, those with Care Assessment Needs scores of >95, age >70 years, and ambulatory care sensitive admissions. Generally, the nurse care managers identify a list of patients whom they call/reach out to, make an initial assessment, then contact other team members (e.g., social work, pharmacy, and PCP), and refer to other programs (e.g., telehealth or caregiver support), as needed. In addition, nurse care managers make post-emergency department and post-hospital discharge telephone visits to avoid unnecessary readmissions or follow-up visits to the emergency department. Social workers on the team connect with interprofessional teams daily to identify veterans who have unmet social determinants of health needs, and then contact veterans using telephone or virtual visit, to coordinate care. Social workers also proactively address advance care planning, and document patient and caregiver wishes and a healthcare surrogate.</p>
Screen to identify loss of in-home support of patients with complex care needs and their caregivers and connect them to needed resources	<ul style="list-style-type: none"> • As you see patients, virtually or in person, intentionally create time to check in with caregivers. • Screen patients and caregivers for challenges with obtaining essential services, and for services that have decreased, such as home care services and day care. Check if their basic needs are met (food, medications, and household supplies). Ask caregivers about the impact of social distancing and staying home, and mental health needs (isolation, depression, and anxiety). • Fill the gap created by loss of the usual support network. Connect caregivers to home health agencies, counseling, and other available community resources. Stay abreast of the changing waivers for home and community-based services. 	<p>VA ADHC Program: Veterans are no longer coming to the VA for ADHC. All ADHC veterans and identified caregivers are contacted to identify any essential home care services or mental health needs (isolation, depression, or anxiety) that may be needed during this period of suspension. If services are identified, the program staff work to ensure that support services, such as home health aide and Meals on Wheels, are in place when ADHC is no longer providing services. The ADHC staff establish a follow-up plan of care and coordinate care for each veteran via telephone or video telehealth during this period of suspension, to ensure that the veteran's status and needs do not change. If status of the veteran changes during this time, staff assist with any resources that may be needed.</p>
Offer caregiver support and education	<ul style="list-style-type: none"> • Develop a list of local and national resources and share it with caregivers. Provide links to COVID-19 educational resources and organizations, such as the Area Agencies on Aging, Family Caregiver Alliance, American Association of Retired Persons, and National Alliance of Caregiving. Several of these have developed resources and offer online support groups and communities for caregivers. 	<p>VA CSP education tip sheet: VA CSP developed a tip sheet called "Caregiving During COVID" (https://www.caregiver.va.gov/pdfs/CSP-Caregiving-During-COVID-19_TipSheet-23April-2020.pdf#), available online on the CSP's Home Page. This was shared widely via e-mail, secure messaging using electronic health records, and social media. The public-facing VA caregiver support program website includes links to several online resources and information relevant for all caregivers (https://www.caregiver.va.gov/index.asp).</p>

(Continues)

Table 1 (Contd.)

Recommendation	Guidance for Providers and Practices	Examples from VA
	<ul style="list-style-type: none"> • Connect caregivers to available support groups and social workers or case managers in your local area (https://eldercare.acl.gov/Public/Index.aspx; https://www.caregiver.org/support-groups). • Let caregivers know that you and your staff are there for them. Give them a reliable way to reach you. Use available staff, volunteers, and other modalities to educate about COVID-19, social distancing, what to do when they need assistance, signs and symptoms to prevent unnecessary visits to facilities, and check in on isolated caregivers. If appropriate, have your staff incorporate this into regularly scheduled patient and caregiver education calls. Take steps to ensure they have needed care in place at home for their loved one, or offer ways to obtain care if necessary. Suggest that they ask a family member or friend to regularly call to support them and check in on them. Validate their concerns and encourage them to ask for help and support. Help them develop a contingency plan for caring for the older adult if they are overwhelmed or fall sick themselves. Refer to mental health support and counseling those who have a high degree of burden or are experiencing depression or anxiety. Remind caregivers to check with their employers about paid leave or other caregiver benefits at work. 	<p>VA's CSP support groups: The VA CSP program offers online and telephonic caregiver support groups. Some groups have increased in frequency during the pandemic.</p> <p>VA's CSP screening for high-risk patients and their caregivers: The VA CSP's CSCs are screening veterans who have high-level care needs, including those requiring assistance with activities of daily living and receiving in-home services. For veterans identified as high risk, the CSCs are contacting primary caregivers by telephone or video to take the following actions: identify backup plan(s) should the caregiver not be able to care for the veteran in the home; identify familial and other support system and/or professional supports available; review if a secondary family caregiver is available to provide care; assess whether the primary caregiver has adequate supplies or methods and resources for obtaining supplies and coordinate intervention as needed; complete an overall needs assessment and provide appropriate VA and community resources for intervention and referral; and confirm that the primary caregiver has access to health insurance, and is aware of available healthcare and mental health supports through VA or through private health insurance plans and coordinate referrals as appropriate.</p>
Leverage technology	<ul style="list-style-type: none"> • Supplement required care with proactive telephone and/or video contact, depending on availability of technology, ability, and willingness of care recipient and caregiver. Limit face-to-face visits to those that are necessary for safe delivery of care, tailored to individual patient needs. • Support caregivers via technology. Suggest sites to access information and resources online (https://www.caregiving.org/resources/covid-19-resources-for-families/) and online strategies to maintain connectedness and combat loneliness (https://www.endsocialisolation.org/covid19). 	<p>VA HBPC Program's shift to virtual care: Between February and April 2020, this program decreased monthly face-to-face visits by 40% and substantially increased virtual care (telephone visits by >200% and video visits by >2000% from 461 to 10,612). Total number of HBPC combined encounters increased nationally by about 30%. Care includes frequent check ins, coordinating care, and addressing social isolation in veterans and caregivers.</p> <p>VA's Annie Caregiver Text Support: Annie is VA's automated text messaging program available to caregivers engaged with the VA CSP, which sends health information and reminders to caregivers (https://mobile.va.gov/app/annie-app-veterans). Messages are sent via text messaging three times per week, and may be educational, motivational, or activities to manage stress and promote self-care.</p>

Abbreviations: ADHC, Adult Day Health Care; CSC, caregiver support coordinator; CSP, Caregiver Support Program; HBPC, Home-Based Primary Care; PCP, primary care physician; VA, Veterans Health Affairs.

nursing tasks that are typically performed by trained professionals.¹ The COVID-19 pandemic and resulting calls for physical distancing have profoundly changed the way people interact, raising concern about the potential for negative

physical and mental health consequences across society. Older adults may be especially impacted due to their higher risk of experiencing severe COVID-19 illness and the potential compounding of other social and structural

vulnerabilities.² These vulnerabilities include the negative impacts of the COVID-19 pandemic on their family caregivers.

There are multiple reasons caregivers may experience higher than usual stress and burden during COVID-19. The activities of caregiving may be harder to accomplish. Communication and coordination with healthcare providers may be interrupted by canceled appointments and challenges in reaching providers. Caregivers may be unable to rely on their usual network of formal and informal in-home supports and face escalating challenges in accessing needed in-home care. Additionally, support programs, such as adult day health care, may not be available, hospitalized patients may be discharged home sooner and sicker than before, and post-acute care options may be more limited.

Caregivers may also experience negative physical and mental health outcomes. They often have their own COVID-19 exposure risks and concomitant increased concerns about self-care and health, leading to stress when weighing decisions about care recipients' care needs. Many caregivers experience feelings of social isolation, which may be exacerbated by social distancing policy measures. Older caregivers may be at particular risk for injury as they take on additional hands-on caregiving responsibilities, such as assisting with mobility and transfers in the absence of other help. Finally, caregivers may be struggling with income loss, job loss, and lack of dependent care and childcare.

Added caregiver burden and lack of informal care may prevent older care recipients from being safely maintained in their homes, increasing the risk of requiring care in emergency departments, hospitals, or long-term care facilities. Caregivers of military veterans seen within the Veterans Health Affairs (VA) system are at especially great risk for strain and in need of caregiver support because 75% of veterans with functional impairment rely on informal care for daily support and disease management.³ Caregiver stress and burnout endanger a critical component of the care ecosystems for these veterans. Hence, this was a critical topic at the Veteran's Family Caregiver and Survivor Advisory Committee Meeting on March 25, 2020.

Recognizing the critical role caregivers play in supporting the health of older veterans, especially during COVID-19, the VA has taken several measures for proactively identifying caregivers, assessing their needs, and matching them to available existing programs in VA's Caregiver Support Program,⁴ Geriatrics and Extended Care,⁵ or the community.^{6,7} The VA has also been nimble in leveraging its technological capabilities and in transforming routine face-to-face care to virtual.⁸ This pivot to virtual care potentially creates opportunities to improve the caregiving experience by reducing transportation burden and increasing virtual in-home support, provided the veteran and caregiver have the tools, ability, and willingness to use technology.

Here, we offer some recommendations for practices and healthcare systems to support high-risk veterans and their caregivers, using efforts underway at the VA (Table 1).

The role of the caregiver is integral to patients' health and well-being, and the unintended negative consequences for caregivers must be addressed. This is particularly true

during the COVID-19 pandemic. We acknowledge the incremental challenges in addressing these needs during this time when frontline providers are overwhelmed and home care is inconsistently available. This may be particularly difficult in settings that do not contain the supports and resources available in large integrated healthcare systems, like the VA. However, a team approach and targeted referrals may be sufficient for proactively identifying caregivers, assessing their needs, and matching them to available existing services. Any incremental increase in support may protect older adults and their caregivers during this rapidly evolving pandemic and make all the difference between older individuals remaining in the home or being institutionalized. It will be important to continue to monitor and support caregivers as the pandemic progresses because the impacts may be felt long after physical distancing requirements end. These efforts are well aligned with the Recognize, Assist, Include, Support, and Engage Family Caregivers Act, which requires the Department of Health and Human Services to delineate a national strategy for recognizing and supporting the more than 43 million unpaid family caregivers,⁹ and with the VA Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act.¹⁰

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