

Inability to Access Health Care Due to COVID-19 Among Medicare Beneficiaries

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As a serious public health threat, the COVID-19 pandemic has affected and continues to affect many people in the United States. The first COVID-19 case in the United States was identified in a long-term care facility in Washington in January 2020,¹ and the United States currently has the largest number of confirmed cases in the world. As of January 4, 2022, the CDC has documented more than 56 million cases of COVID-19 and more than 825,000 COVID-19–related deaths in the United States.²

Adults who are 65 years or older are at high risk for severe illness from COVID-19. Studies have shown that age has a negative impact on viral clearance.³ Additionally, older age is associated with a higher infection-to-fatality rate (IFR) of COVID-19; the IFR increases with age from less than 0.003 in children/adolescents to 0.456 in the group aged 60 to 64 years, and then increases dramatically after 65 years from 1.075 in the group aged 65 to 69 years to 8.292 in the group older than 80 years.⁴ As such, approximately 80% of COVID-19–related deaths reported in the United States are among adults 65 years and older.⁵ Additionally, many preexisting chronic conditions, which become more common with aging, are proven risk factors for poor outcomes from COVID-19.⁶

Although mild symptoms caused by COVID-19 can be managed at home, severe illness from COVID-19 often requires hospitalization.⁷ As a result, inpatient health care utilization has increased dramatically in the United States during the pandemic as resources are allocated to minimize patient suffering and mortality from COVID-19.⁸ Although overall health care utilization related to COVID-19 increased during the pandemic, many people, especially those in high-risk groups such as older adults, have experienced barriers to access. For example, states' implementation of stay-at-home orders may have led to cancellation of scheduled doctors' appointments.⁹ Also, fear of contracting COVID-19 might have led people to avoid visiting hospitals and doctor's offices.¹⁰ Although it is recognized that there is reduced access to health care services due to the COVID-19 pandemic in the general population, the understanding of which factors are associated with being unable to access health care services due to the pandemic is limited. The primary objective of this study was to identify factors (ie, sociodemographics and comorbidity

ABSTRACT

OBJECTIVES: The understanding of which factors are associated with inability to access health care services due to the COVID-19 pandemic is limited. We aimed to examine factors associated with being unable to access health care due to the pandemic among Medicare beneficiaries.

STUDY DESIGN: A cross-sectional study.

METHODS: We analyzed the summer and fall 2020 Medicare Current Beneficiary Survey COVID-19 Rapid Response Supplement Questionnaire data. Our study included community-dwelling Medicare beneficiaries 65 years and older (summer: n = 8751; fall: n = 7421). Logistic regressions were used to examine factors (eg, sociodemographics, comorbidities) associated with being unable to access health care services due to the pandemic.

RESULTS: Approximately 20.9% and 7.5% of the beneficiaries reported they were unable to access health care services due to the pandemic in the summer and fall of 2020, respectively. The most frequent types of services that beneficiaries were unable to access were dental care (summer, 45.5%; fall, 35.1%) and regular check-ups (summer, 35.9%; fall, 46.1%). Beneficiaries who reported a higher income (income \geq \$25,000) (summer: odds ratio [OR], 1.55; $P < .001$; fall: OR, 1.52; $P = .002$) or speaking English at home (summer: OR, 1.50; $P = .016$; fall: OR, 1.53; $P = .082$) were more likely to report being unable to access services than their counterparts (lower income or speaking a language other than English at home). Beneficiaries with at least 4 chronic conditions were unable to access health care significantly more often than those with 1 or no conditions.

CONCLUSIONS: Given that sociodemographics and comorbidity burden contributed to the disparities that we observed in accessibility of health care services due to the pandemic, these findings can allow decision makers to target resource allocation and outreach efforts to those populations most at risk.

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TAKEAWAY POINTS

- ▶ The understanding of which factors are associated with being unable to access health care services due to COVID-19 is limited.
- ▶ Approximately one-fifth of Medicare beneficiaries were unable to access health care due to the pandemic in the summer of 2020, but this figure was much lower at 7% in the fall of 2020.
- ▶ We found that beneficiaries who reported low income or speak a language other than English at home were less likely to report being unable to access services than their counterparts.
- ▶ These findings can inform decision makers on resource allocation, public awareness, and outreach efforts for at-risk populations.

burden) associated with inability to access health care due to the COVID-19 pandemic among Medicare beneficiaries 65 years and older. In addition, we examined types of health care services that were most difficult to access due to the pandemic in this population.

MATERIALS AND METHODS

Data Source

In this cross-sectional study, we used data from the nationally representative Medicare Current Beneficiary Survey (MCBS) Public Use File (PUF) COVID-19 Rapid Response Supplement Questionnaires, which were administered to community-dwelling Medicare beneficiaries during the summer (June-July) and fall (October-November) of 2020.^{11,12} The supplement questionnaires collected COVID-19 pandemic–related information as part of the effort by the HHS secretary to understand how the pandemic was affecting the Medicare population. The survey was conducted by phone in either English or Spanish and employed a multistage cluster sample design.

Study Population

The study population included Medicare beneficiaries (1) 65 years or older and (2) who responded to the question in the supplement questionnaires about inability to access health care services because of COVID-19 (summer: n = 8751; fall: n = 7421).

Measure

The primary outcome variable was inability to access health care due to the COVID-19 pandemic (a binary variable), which was defined by Medicare beneficiaries' self-reported responses to the following question: "At any time since the beginning of the coronavirus outbreak (for summer survey) or since July 1, 2020 (for fall survey), did [you/sample person (SP)] need medical care for something other than coronavirus, but did not get it because of the coronavirus outbreak?" If Medicare beneficiaries answered "yes" to this question, the following 9 questions were asked to investigate the types of health care services that they were unable to access: "[Were you/Was SP] unable to get any of the following types of care because of the coronavirus outbreak?" with the listed types being (1) urgent care for an accident or illness; (2) a surgical procedure; (3) a diagnostic or medical screening test; (4) treatment for an ongoing condition; (5) a regular check-up; (6) prescription

drugs or medications; (7) dental care; (8) vision care; and (9) hearing care.

The independent variables were factors pertaining to demographic characteristics and health status. The following variables were included in this study: age group (65-74 years, 75 years and older), sex (male, female), race/ethnicity (non-Hispanic White, non-Hispanic African American, Hispanic, non-Hispanic other), metropolitan area (yes, no), Census region (Northeast, Midwest, South, West),

low income (yes [$< \$25,000$], no [$\geq \$25,000$]), language other than English spoken at home (yes, no), living alone (yes, no), and number of comorbid conditions (0-1, 2-3, 4-5, 6 or more).

Statistical Analysis

Appropriate sampling weights to accommodate for the complex survey design were incorporated in all analyses. We used Wald χ^2 tests to examine the differences in prevalence of inability to access health care services by demographic characteristics and health status. We also used multivariable logistic regression models to examine factors associated with inability to access health care services.

The α level for statistical significance was set at 0.05. All analyses were performed using SAS Enterprise Guide version 6.1 (SAS Institute Inc) and Stata/MP version 16.1 (StataCorp LLC). Analysis was completed in 2021.

RESULTS

Table 1 describes the demographics and clinical characteristics of Medicare beneficiaries 65 years or older by ability to access health care due to the COVID-19 pandemic (in the summer survey: n = 8751; weighted n = 45.9 million; in the fall survey: n = 7421; weighted n = 39.6 million). Among them, 20.9% (n = 1682; weighted n = 9.5 million) reported that they were unable to access health care due to the COVID-19 pandemic in the summer survey, but only 7.5% (n = 507; weighted n = 3.0 million) responded this way in the fall survey.

The **Figure** displays the types of health care services that were inaccessible to study beneficiaries due to the COVID-19 pandemic. In the summer survey, among beneficiaries who experienced access issues due to the COVID-19 pandemic, the most frequent types of health care services that proved difficult to access were dental care (45.5%), a regular check-up (35.9%), treatment for an ongoing condition (33.1%), and a diagnostic or medical screening test (32.0%). Only 3.9% reported that they were not able to obtain urgent care. The distribution of the type of services unavailable to beneficiaries due to the pandemic was very similar in the fall survey as well, in which the 2 most inaccessible types of care were dental care (35.1%) and a regular check-up (36.1%) and only 4.0% reported that they were not able to obtain urgent care.

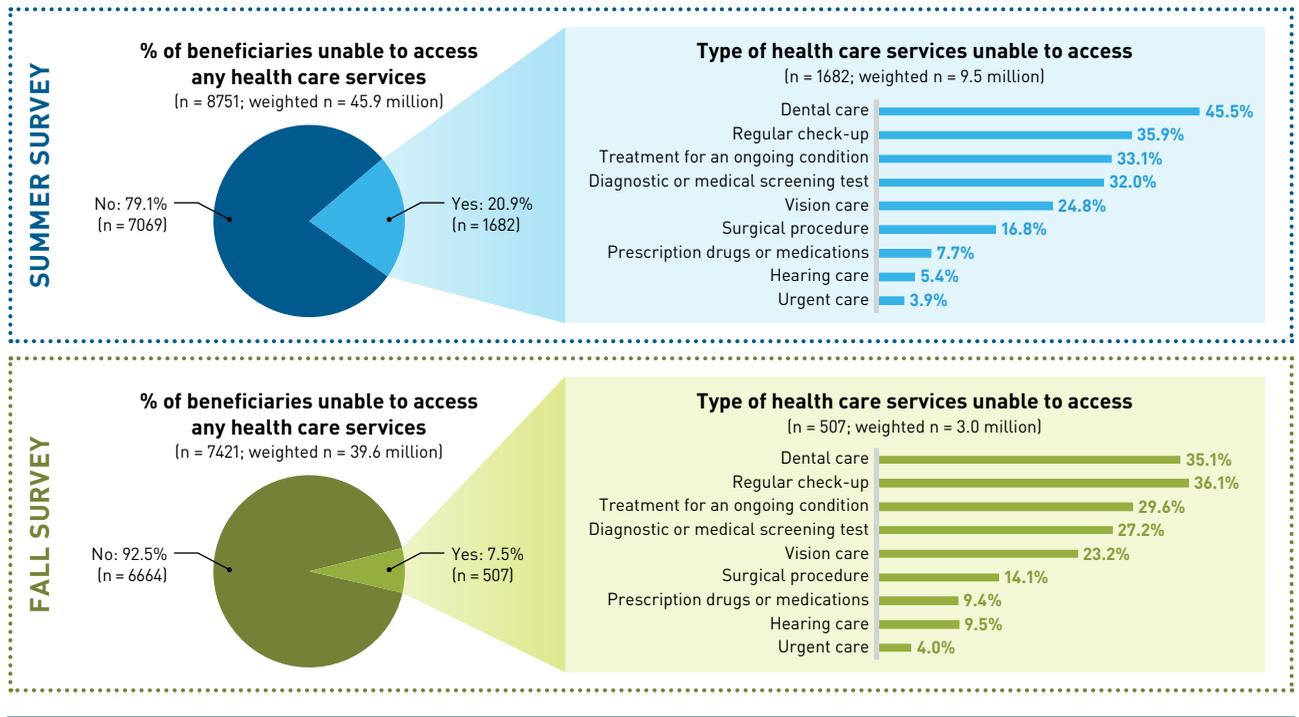
Table 2 shows the odds ratios (ORs) of being unable to access health care due to the COVID-19 pandemic by demographic and

TABLE 1. Characteristics of Medicare Beneficiaries by Inability to Access Health Care During COVID-19 Pandemic

Variable	Inability to access health care due to COVID-19 pandemic									
	Summer survey n = 8751; weighted n = 45.9 million					Fall survey n = 7421; weighted n = 39.6 million				
	Yes		No		P	Yes		No		P
	n	Weighted %	n	Weighted %		n	Weighted %	n	Weighted %	
Total	1682	100%	7069	100%		507	100%	6664	100%	
Sociodemographic status										
Age group										
65-74 years	833	67.9%	3000	61.8%	<.001	247	66.0%	2793	60.5%	.030
≥75 years	849	32.1%	4069	38.2%		260	34.0%	3871	39.6%	
Sex										
Male	732	43.5%	3154	45.4%	.266	229	45.3%	2937	44.5%	.807
Female	950	56.5%	3915	54.6%		278	54.7%	3727	55.5%	
Race/ethnicity										
White, non-Hispanic	1401	84.0%	5369	76.7%	<.001	400	78.1%	5202	78.4%	.740
Black, non-Hispanic	78	4.9%	601	9.3%		31	7.5%	511	8.3%	
Hispanic	126	5.7%	731	8.0%		52	7.6%	638	7.9%	
Others	77	5.4%	368	6.1%		24	6.8%	313	5.5%	
Census region										
Northeast	328	20.0%	1202	17.6%	<.001	104	19.6%	1197	17.8%	.086
Midwest	447	26.0%	1566	21.4%		119	21.1%	1557	22.3%	
South	480	28.7%	2798	38.8%		155	32.2%	2512	37.5%	
West	427	25.3%	1503	22.2%		129	27.0%	1398	22.4%	
Metro area										
Yes	1324	81.2%	5439	80.6%	.701	403	80.5%	5151	81.1%	.819
No	358	18.8%	1630	19.5%		104	19.5%	1513	18.9%	
Low income (< \$25,000)										
Yes	403	18.3%	2331	27.7%	<.001	126	19.7%	2062	26.0%	.007
No	1279	81.7%	4738	72.3%		381	80.3%	4602	74.0%	
Living alone										
Yes	368	19.1%	1629	20.5%	.346	97	15.0%	1330	17.6%	.187
No	1314	80.9%	5440	79.5%		410	85.0%	5334	82.4%	
Other language at home										
Yes	161	7.4%	933	11.7%	<.001	56	8.9%	810	11.0%	.215
No	1521	92.6%	6136	88.4%		451	91.2%	5854	89.0%	
Chronic conditions, n										
0-1	206	15.3%	1074	18.6%	<.001	53	12.1%	1000	18.3%	<.001
2-3	591	37.4%	2648	39.0%		160	33.4%	2512	39.1%	
4-5	565	31.0%	2228	29.2%		186	33.4%	2097	29.4%	
≥6	320	16.3%	1119	13.1%		108	21.1%	1055	13.2%	

comorbidity characteristics among Medicare beneficiaries 65 years and older using multivariable logistic regression models. Medicare beneficiaries aged 65 to 74 years were more likely to report being unable to access health care due to the COVID-19 pandemic compared with those 75 years and older in both the summer and fall surveys (summer: OR, 1.33; 95% CI, 1.16-1.52; $P < .001$; fall: OR, 1.33; 95% CI, 1.08-1.63; $P = .007$). Compared with beneficiaries residing in the South, those in the Northeast, West, and Midwest were more likely

to report being unable to access health care (Northeast: OR, 1.50; 95% CI, 1.19-1.80; $P = .001$; West: OR, 1.53; 95% CI, 1.16-2.02; $P = .003$; Midwest: OR, 1.51; 95% CI, 1.20-1.88; $P < .001$) in the summer survey. However, the magnitude and significance of ORs were decreased in the fall survey (Table 2). In both the summer and fall surveys, higher odds of inability to access health care due to the COVID-19 pandemic were estimated among beneficiaries with higher income (income \geq \$25,000) (summer: OR, 1.55; 95% CI, 1.34-1.80; $P < .001$; fall:

FIGURE. Type of Health Care Services Not Accessible Due to COVID-19 Pandemic Among Medicare Beneficiaries

OR, 1.52; 95% CI, 1.17-1.97; $P = .002$) and those who speak English at home (summer: OR, 1.50; 95% CI, 1.08-2.08; $P = .016$, fall: OR, 1.53; 95% CI, 0.95-2.46; $P = .082$) compared with their counterparts (beneficiaries with lower income [$< \$25,000$] or those who speak a language other than English at home). Beneficiaries with 4 or more chronic conditions were unable to access health care significantly more often than those with 1 or 0 chronic conditions in both the summer and fall surveys. Sex, residing in a metropolitan area, and living alone were not significantly associated with being unable to access health care due to the COVID-19 pandemic.

DISCUSSION

This study aimed to assess sociodemographic and comorbidity characteristics associated with inability to access health care due to the COVID-19 pandemic among Medicare beneficiaries who are 65 years or older. Based on the MCBS PUF surveys conducted in the summer (June and July) and fall (October and November) of 2020, we found that approximately one-fifth of Medicare beneficiaries were unable to access health care due to the pandemic in the summer, but this figure was much lower at 7% in the fall. Inability to obtain dental care, regular check-ups, and screening tests accounted for a substantial portion of beneficiaries' inability to access health care due to the COVID-19 pandemic, with inability to obtain treatment for an ongoing condition also being a major contributor. Generally, our findings indicate that beneficiaries with multiple chronic

conditions who are known to use health care services frequently experienced higher rates of inability to access health care due to the pandemic than their counterparts.

It is estimated that adults 65 years or older constituted 16.9% of the US population as of 2020.¹³ Older adults often require more health care services and have higher health care costs than those who are younger. The medical care of elderly patients costs more on average than patients in other age cohorts, with an annual mean of \$63,798 for medical expenditures among Medicare-aged adults.^{14,15} Despite the higher utilization of health care services among older adults, they may have been hesitant to use health care services during the pandemic because they are at greater risk for severe illness from exposure to the virus.^{3-5,16,17} Lack of appropriate use of health care services to meet disease prevention and treatment needs may lead to lasting harm in this population both during and after the COVID-19 pandemic. Given the situation, increased utilization of telehealth has been observed and advocated as a way of resolving this accessibility issue.^{18,19}

Issues with obtaining dental care due to the pandemic have also been documented in a previous study. Using the RAND American Life Panel survey, the prior study found that approximately half of US adults reported delaying or forgoing dental care due to the pandemic during the spring of 2020.²⁰ This could be due to the fact that delay of dental-related care in older adults will likely have minimal immediate health consequences compared with the potential risk of severe illness from COVID-19. Also, avoidance of

dental care may be a result of increased fear of infection related to how the care is performed, such as during an open-mouth procedure.

Not surprisingly, being unable to access preventive services, including regular check-ups and diagnostic or medical screening tests, also accounted for a substantial portion of the inability to access health care due to the pandemic. Findings from several previous studies have raised concerns about delayed preventive services, especially in regard to cancer screening. A study conducted in Italy found a 39% decrease in cancer diagnoses during the pandemic compared with cancer diagnoses pre-pandemic.²¹ Another study performed in the United Kingdom estimated a 4.8% to 16.6% increase in avoidable cancer deaths potentially caused by diagnostic delays due to the pandemic.²² Although limiting exposure to COVID-19 is essential until the vaccine is widely available worldwide and herd immunity is reached, providers, hospitals, and laboratories need to anticipate the increased demand of preventive services as stay-at-home policies loosen to ensure that older patients receive the care they need.

Finally, another notable area of limited access to health care is inability to obtain treatment for an ongoing condition. Among the study beneficiaries unable to access any health care services, one-third of them reported being unable to obtain treatment for an ongoing condition. According to CMS, 65% of Medicare beneficiaries 65 years and older have hypertension, 46% have arthritis, and 33% have diabetes.²³ Failure to provide health care in a timely and safe manner for these chronic conditions can negatively affect the health of older patients, with consequences potentially lasting even after the pandemic. This information is important for providers to consider to ensure that their administrative personnel focus their efforts on contacting their older patients to reschedule missed appointments when applicable.

In this study, we identified various factors associated with inability to access health care during the pandemic, likely related to specific choices made to avoid the risk of exposure to COVID-19. Our study illustrates that individuals who had already experienced health care access disparities *before* the start of the pandemic, such as individuals with incomes less than \$25,000 (lower income) or those who speak a language other than English at home,^{24,25} for example, would most likely not perceive or report increases in the inability to access such services during the pandemic. This is because they already experience challenges with access. However, individuals who traditionally *did not* face any barriers or challenges to accessing health care services before the pandemic would report that they now faced them during the COVID-19 pandemic.

Interestingly, beneficiaries residing in the Northeast, Midwest, and West were more likely to report inability to access health care compared with those residing in the South, especially in the summer survey. This may be because many states in the South (eg, Florida, Georgia, Texas) implemented later and less restrictive stay-at-home orders and reopened more quickly than other states.⁹ Therefore, it is expected that fewer beneficiaries reported lack of access to care in this region. However, this trend dissipated in the fall.

Finally, during the COVID-19 pandemic, Medicare beneficiaries with a higher number of comorbid conditions reported more

TABLE 2. ORs of Being Unable to Access Health Care Due to the COVID-19 Pandemic Among Medicare Beneficiaries

Variable	Summer survey			Fall survey		
	OR	95% CI	P	OR	95% CI	P
Age group						
65-74 years	1.33	1.16-1.52	<.001	1.33	1.08-1.63	.007
≥75 years	Ref			Ref		
Sex						
Male	Ref			Ref		
Female	1.14	0.99-1.32	.076	1.02	0.79-1.32	.881
Race/ethnicity						
White, non-Hispanic	Ref			Ref		
Black, non-Hispanic	0.58	0.44-0.76	<.001	1.04	0.65-1.66	.868
Hispanic	0.92	0.67-1.27	.613	1.36	0.88-2.11	.166
Others	0.97	0.67-1.41	.878	1.41	0.75-2.64	.286
Metro area						
Yes	1.07	0.87-1.32	.535	0.91	0.64-1.29	.591
No	Ref			Ref		
Living alone						
Yes	0.96	0.80-1.17	.702	0.91	0.68-1.21	.504
No	Ref			Ref		
Census region						
Northeast	1.50	1.19-1.89	.001	1.33	0.99-1.78	.057
Midwest	1.53	1.16-2.02	.003	1.08	0.79-1.48	.615
South	Ref			Ref		
West	1.51	1.20-1.88	<.001	1.40	1.04-1.88	.029
Other language at home						
Yes	Ref			Ref		
No	1.50	1.08-2.08	.016	1.53	0.95-2.46	.082
Low income (<\$25,000)						
Yes	Ref			Ref		
No	1.55	1.34-1.80	<.001	1.52	1.17-1.97	.002
Chronic conditions, n						
0-1	Ref			Ref		
2-3	1.22	1.02-1.45	.028	1.34	0.91-1.98	.132
4-5	1.43	1.17-1.74	.001	1.88	1.27-2.78	.002
≥6	1.83	1.46-2.29	<.001	2.79	1.85-4.20	<.001

OR, odds ratio; ref, reference.

difficulty accessing health care than beneficiaries with a lower comorbidity burden. One possible explanation for this trend is that multimorbidity is a risk factor for severe illness from COVID-19, so those with numerous chronic conditions were more hesitant to visit hospitals and physicians' offices. Additionally, Medicare beneficiaries who are living with more chronic conditions likely already had more appointments scheduled with doctors before COVID-19, which may have been canceled and delayed due to the pandemic, resulting in higher reports of inability to access health care.

The findings from this study have important implications for managing Medicare beneficiaries' health during and after the pandemic. It has been almost 2 years since the first reported cases of COVID-19, and the long-term effects caused by inability to access health care due to the pandemic in the older population are still unclear. A substantial effort has been made to fight the COVID-19 pandemic, including vaccinating the public to reach herd immunity. However, further efforts to provide timely and safe care (eg, telehealth) should continue to be implemented and developed beyond the COVID-19 pandemic, because there are inequalities in health care that existed beforehand. The results of this study further inform health care professionals and policy makers on inability to access health care during the COVID-19 pandemic in this vulnerable population.

Limitations

This study had several potential limitations to consider. First, the findings may not be generalizable to other populations beyond community-dwelling Medicare beneficiaries. Second, although this study identified statistically significant factors associated with inability to access health care due to the pandemic, causality between patient characteristics and inability to access health care cannot be determined because this was a cross-sectional study. Third, there is potential for recall bias because the data came from a survey of participant-reported outcomes. Fourth, because the data came from a survey of community-dwelling patients rather than institutionalized patients, there is a potential for selection bias, including a healthy user effect. Fifth, MCBS predefined categories of sociodemographic variables (eg, only 2-level categories for income); therefore, different categories for some variables could result in different findings. Finally, with claims data not available in the MCBS PUF COVID-19 Supplemental File, we were unable to explore and adjust our regression models for several possible confounders, such as COVID-19 infection rates in this population and historical use of the emergency department as primary care, which could have affected our findings.

CONCLUSIONS

Our analysis of a nationally representative survey of US Medicare beneficiaries found that many Medicare beneficiaries 65 years or older reported inability to access health care during the COVID-19 pandemic, including lack of access to both regular check-ups and treatment for an ongoing condition. We identified several sociodemographic (eg, age, income status) and health status (eg, chronic conditions) characteristics that were associated with lack of access to health care services. Our findings could enable decision makers to target resource allocation, public awareness campaigns, and outreach efforts to those populations most at risk during the pandemic. ■

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