The Impact of COVID-19: Findings from the Second Wave of a Survey of CRNAs

To the editor: CRNAs continue to be affected by the COVID-19 pandemic and the stress it has placed on health systems and providers across the country. In early April, the AANA conducted its initial survey to assess preparedness among facilities responding to COVID-19 and how CRNA employment was impacted. The results suggested a profound impact on CRNAs in terms of employment, workplace safety and PPE availability, and changes in roles and responsibilities. To update the status of these topics, the AANA conducted a second wave of this survey to determine how the COVID-19 pandemic continues to impact CRNAs and the care they deliver. The second wave survey again asked questions about employment status, including new positions in high need locations, PPE availability and reuse, and CRNA concerns and welfare. This time, the survey also incorporated questions relating to preparations to resume elective and non-urgent procedures as well as the prevalence of anesthesia and pain medication shortages.

Method

The AANA COVID-19 Second Wave Survey was released to all certified and recertified AANA members between May 5 to May 18, 2020. Respondents were asked about their experiences since the onset of the COVID-19 pandemic and about anticipated future impacts, including the potential to return to employment. The survey link was emailed to 42,750 members, of which 6,560 completed a portion of the survey for a response rate of 15.3%. Participants were free to skip any question resulting in a varying number of responses for each question.

Topics included aspects of employment status such as primary facility type, impact on employment such as furlough or reduction in hours, anticipated near-term changes in employment, and planning related to the resumption of elective and non-urgent procedures. Also, questions related to clinical practice challenges, such as shortages of anesthesia and pain medications and potential changes to their role as CRNA, were asked of respondents working in clinical care. As a follow-up to the first survey, respondents were again

Results are reported from a follow-up survey of CRNAs on topics related to COVID-19 impact on employment, clinical care delivery including preparation for the resumption of elective procedures, and provider safety and welfare such as PPE availability and reuse. Data were collected May 5 - 18 2020 from 6,560 total respondents. Findings suggest continued impact from COVID-19 on CRNAs. However, there is also evidence that many CRNAs negatively impacted by reductions in hours, furloughs, or termination in the early phase of the pandemic are preparing to return to a greater level of employment. Other findings indicate that, while shortages of PPE persist to some degree, they are less severe than observed during the first wave of the survey conducted in late March and early April 2020.

Keywords: Certified Registered Nurse Anesthetists, COVID-19, CRNA employment, pandemic.

<table>
<thead>
<tr>
<th>Wave 1</th>
<th>Wave 2</th>
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<tbody>
<tr>
<td>Overall</td>
<td>Overall</td>
</tr>
<tr>
<td>N=8,514</td>
<td>N=6,411</td>
</tr>
<tr>
<td>New Location -</td>
<td>-</td>
</tr>
<tr>
<td>Furloughed (temporary layoff) 1,483</td>
<td>17.4%</td>
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<tr>
<td>Increased hours 206</td>
<td>2.4%</td>
</tr>
<tr>
<td>No change 2,604</td>
<td>30.6%</td>
</tr>
<tr>
<td>Reduced Hours 4,080</td>
<td>47.9%</td>
</tr>
<tr>
<td>Termination 141</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Table 1. Change in Overall Employment by Wave and Wave 2 Type Comparison
asked about PPE shortages, including the reuse of N95 masks.

Changes in Employment Status
Similar to the Wave 1 survey, respondents were asked whether they experienced changes in their employment status due to COVID-19.

Overall results are reported in Table 1 for Waves 1 and 2 with breakouts by type of employment for Wave 2. Compared to the previous wave, larger shares of CRNAs reported furloughs (20.1% vs. 17.4%) and terminations (2.2% vs. 1.7%) with smaller shares indicating no change or reduced hours compared to the previous wave. Furloughs and terminations are more common among the self-employed, while regular employees are more likely to be experiencing reduced hours. Overall, 69.4% of responding CRNAs indicated a negative impact of COVID-19 in the form of a furlough, termination, or reduction in hours in Wave 2. However,
Based on results reported in Table 2 for anticipated changes in the next 3 months, CRNAs anticipate that these impacts are only temporary. Forty-seven percent of CRNAs with a regular wage or salary and 40.2% of the self-employed CRNAs anticipate returning to their previous scheduled hours of employment in the next 3 months. Overall, 70.4% anticipate increased hours or a return to previous employment.

**Relocation**

A new question was added to assess whether respondents had accepted a new position in response to COVID-19, and 5.2% of the respondents reported that they started working in a new location (see Table 1). Most respondents (53.8%) indicated that they went to a new facility located in the same community where they reside. However, 9.1% went to a facility outside their community, but still in the same state and 22.1% went to a facility in another state. Of those who went to another state, 76% went to either New York or New Jersey. The primary reasons for relocation include 42.5% reporting a layoff or reduction in hours at their primary facility and 36.2% reporting a desire to put their skills to use during this difficult time.

**Caring for COVID-19 Patients**

Sixty-eight percent (4,426) of respondents indicated they worked in a clinical setting and answered a series of practice-related questions on PPE, preparations for the resumption of elective surgeries, and drug shortages. Those indicating current work in clinical care were asked whether they cared for COVID-19 patients and 7.7% reported that this was their primary responsibility and an additional 57.7% responded that they cared for COVID patients only as needed.

**PPE Availability and Reuse**

N95 masks remain the most common essential PPE item reported in short supply, with 48% of respondents indicating that their facility is either short of stock or out of stock. Figure 1 reported short and out of stock levels for PPE for each wave. Because ‘Don’t Know’ responses have been removed, reported items have variable N sizes. Compared to the Wave 1 survey, rates of short and out stock on various PPE are substantially lower across virtually all assessed items. For example, in the Wave 1 survey 73.0% and 71.9% respondents reported they were short/out of stock of Tyvek suits and PAPRs while in the Wave 2 survey, only 56.5% and 52.5% respondents were short/out of stock respectively.

Due to the high rates of N95 mask reuse, a question was added about the frequency of replacement. The results are presented in Figure 2. Only 2.8% of responding CRNAs reported replacing N95 masks after every patient. Daily replacement was reported by 23.7% and 3.1% report-
ing replacing N95 masks multiple
times per day. In contrast, a larger
share of respondents reported using
N95 masks for extended periods,
including 13% who reported using
a single mask for longer than one
week, and 20.9% reported replacing
their masks only when soiled.

CRNA Health and Welfare
Figure 3 describes the adequacy of
crning and testing for health-
care professionals. Only 28.9% of
respondents report that their facility
has adequate screening and testing
while another 29.3% report that
there is adequate screening, but not
enough testing. The other 41.8%
either report inadequate screening
and testing or answer “Don’t
Know.” Respondents were again
asked what major concerns they had
about their health and well-being
during this COVID-19 pandemic,
and the responses were similar to
those reported in Wave 1. Keeping
their families safe (87.2%), followed
by the stress of meeting personal
and family demands (51.4%), were
again the most common concerns of
CRNAs. Concerns about their own
health, such as having underlying
health conditions (23.2%), being in
the vulnerable age group (23.4%),
and/or pregnancy (1.6%) were also
reported.

Resumption of Elective Surgeries
The majority of respondents
(94.5%) indicated that their facility
began rescheduling their elective
and non-urgent procedures based
on the CDC guidelines. Most report
that their facility is now prepar-
ing to resume elective procedures
with only 7.9% reporting otherwise.
Establishing pre-surgical screening
procedures (79.4%) and protocols
to reduce the risk of COVID-19
exposure (73.9%) are the most com-
mon steps being taken to prepare
for the resumption of elective and
non-urgent surgeries. The complete
results are presented in Figure 4.
Drug Shortages
Reported shortages of anesthesia, sedation, or pain medications are presented in Figure 5. Most respondents (63.9%) reported adequate supplies, while 21.6% reported a shortage, and 14.5% did not know the availability of these drugs at their facility.

Conclusion
The results from the Wave 2 survey indicate that impacts from the COVID-19 pandemic are evolving. While results from the Wave 2 survey further demonstrate that CRNAs have been severely impacted, most often by reduced employment opportunities, there are also signs that we have turned a corner. Most adversely impacted CRNAs anticipate a return to work in the near future while some have taken employment in a new location. Yet there are also signs that these negative impacts will persist for some CRNAs, who still anticipate future furloughs or terminations. Most CRNAs report that measures are being taken to plan for the resumption of elective procedures; however, these measures may still imply a reduced volume in the near term. Some are reporting shortages of anesthesia and pain medications, which may also limit the return to normalcy. Further, while shortages of N95 masks and other PPE items persist, it appears that these shortages are less acute than in the early phase of the pandemic. There is evidence that many CRNAs will continue to face challenges related to accessing appropriate PPE with reuse of N95 masks commonly required for many clinicians. Finally, there remain challenges with screening and access to testing for healthcare providers, as well as reported role changes and concerns that are similar to the Wave 1 survey.

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