Influence of Supervision Ratios by Anesthesiologists on First-case Starts and Critical Portions of Anesthetics

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ABSTRACT

Background: Anesthesia groups may wish to decrease the supervision ratio for nontrainee providers. Because hospitals offer many first-case starts and focus on starting these cases on time, the number of anesthesiologists needed is sensitive to this ratio. The number of operating rooms that an anesthesiologist can supervise concurrently is determined by the probability of multiple simultaneous critical portions of cases (*i.e.*, requiring presence) and the availability of cross-coverage. A simulation study showed peak occurrence of critical portions during first cases, and frequent supervision lapses. These predictions were tested using real data from an anesthesia information management system.

Methods: The timing and duration of critical portions of cases were determined from 1 yr of data at a tertiary care hospital. The percentages of days with at least one supervision lapse occurring at supervision ratios between 1:1 and 1:3 were determined.

Results: Even at a supervision ratio of 1:2, lapses occurred on 35% of days (lower 95% confidence limit = 30%). The peak incidence occurred before 8:00 AM, $P < 0.0001$ for the hypothesis that most (*i.e.*, >50%) lapses occurred before this time. The average time from operating room entry until ready for prepping and draping (*i.e.*, anesthesia release time) during first case starts was 22.2 min (95% confidence interval 21.8–22.8 min).

Conclusions: Decreasing the supervision ratio from 1:2 to 1:3 has a large effect on supervision lapses during first-case starts. To mitigate such lapses, either staggered starts or additional anesthesiologists working at the start of the day would be required.

What We Already Know about This Topic

- The most appropriate ratio of anesthesiologists to providers would avoid lapses of supervision during critical portions of anesthetic cases. A simulation study suggested this occurs most commonly with simultaneous first starts.

What This Article Tells Us That Is New

- In a review of 1 yr of data from a tertiary hospital, lapses occurred commonly during first-case starts even with a 1:2 supervision ratio.
- These data suggest that either staggered starts or additional anesthesiologists working at the start of the day would be needed to reduce lapses during critical periods.

ANESTHESIOLOGISTS often function in anesthesia care teams (*e.g.*, supervising concurrently two or more certified registered nurse anesthetists).[1–7] Many anesthesia groups perceive an incentive to decrease their supervision ratio.[8–10] Because a ratio lower than 1:2 does not satisfy accreditation requirements of the American College of Graduate Medical Education, ratios lower than 1:2 apply to nurse anesthetists, not anesthesia residents.‡ Because many hospitals focus on tardiness of first-case starts[11,12] and offer many such starts,[13–16] anesthesiologist staffing is sensitive to the supervision ratio.

The number of operating rooms (ORs) that an anesthesiologist can supervise is limited by the probability of occurrence of two or more simultaneous events (*i.e.*, critical portions) requiring either physical presence or a time-sensitive, nonpreemptive interaction. The probability of supervision lapses is also influenced by the availability of other anesthesiologists to cross-cover. The consequence might be limited to a case delay, but patient safety could be affected when there are coincident critical physiologic events.

In the United States, invoicing Medicare for professional anesthesia services requires that the anesthesiologist "personally participates in the most demanding procedures in the anesthesia plan, including induction and emergence, where indicated."§ However, to reduce the risk of substandard

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‡ ACGME Program Requirements for Graduate Medical Education in Anesthesiology. Available at: http://www.acgme.org/acWebsite/downloads/RRC_progReq/040_anesthesiology_07012008_u03102008.pdf. Accessed December 7, 2011.

§ CMS Manual System, Pub 100–04 Medicare Claims Processing, Transmittal 1324 Available at: https://www.cms.gov/transmittals/downloads/R1324CP.PDF. Accessed December 7, 2011.

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care,[17] many institutions do not reveal patient insurance information. Consequently, all patients are supervised in accordance with Medicare rules. Furthermore, anesthesiologists' time before induction likely will increase from implementation of the World Health Organization surgical safety checklist.[18]

Paoletti and Marty[19] used simulation to estimate the risk of a supervision lapse in surgical suites with various numbers of ORs (2–18) performing a mix of elective cases of various durations (0.8–4.5 h) and a range of anesthesiologist supervision ratios (1:1, 1:2, 1:3). Their model parameters were based on data from several French hospitals. The simulated risk of a supervision lapse peaked at the start of the day. Risks ranged from 14% to 87% for inability to supervise all critical portions of cases at a 1:2 ratio, depending on case length (higher with shorter cases) and the size of the suite (lower with more ORs). Increasing the supervision ratio to 1:3 markedly increased the risk. Providing an unassigned "floater" anesthesiologist greatly reduced the risk.

We explored predictions of the French simulation study using real data captured from an anesthesia information management system to determine the incidence and timing of simultaneous critical portions of cases.

Our first hypothesis was that, as predicted,[19] on one-third of days, there would be supervision lapses even with a supervision ratio of 1:2.

Our second hypothesis was that, as predicted,[19] the peak incidence of supervision lapses occurred at the start of the day (*e.g.*, not during lunch breaks). If true, a supervision ratio less than 1:2 would require an increase in first-case start delays; first-case starts staggered sufficiently to allow the later first case to start on schedule[20]; additional anesthesiologists available at the start of the day; or anesthesiologists not present for all critical portions of cases.

If the first and second hypotheses were true, then the mean anesthesia release time would determine the average delay when two patients, supervised by the same anesthesiologist, were simultaneously ready for induction and all other anesthesiologists were occupied. We previously published how to use such mean times for anesthesia group economic analyses of first-case starts.[12,13]

Our third hypothesis was that anesthesia release times for first-case starts would average 22 min, in the midrange of values determined at Yale-New Haven Hospital.[21]

Materials and Methods

After Thomas Jefferson University Institutional Review Board (Philadelphia, Pennsylvania) approval with waiver of informed consent, we reviewed all 15,656 records in the hospital's anesthesia information management system on nonholiday weekdays between May 3, 2010 and May 1, 2011‖ that took place in the 24 ORs comprising the two largest surgical suites. Inpatient and outpatient procedures are performed in these suites, but not cardiac surgery or diagnostic gastrointestinal procedures. The times of events and descriptive information listed in table 1 were obtained. Heart rate, oxygen saturation, and invasive and noninvasive blood pressure values were retrieved from the anesthesia information management system database, recorded at 1-min intervals. Actual room locations where procedures took place were determined as previously described.[22]

We considered the anesthesia providers (*i.e.*, those individuals delivering direct anesthesia care) to be busy during the interval from the beginning to the end of anesthesia. The duration of breaks and lunch relief was considered as the interval from the documented start of the break to the documented end of the break, or lasting the mean duration of documented breaks if only the start time of the break was recorded in the anesthesia information management system, which is typical practice (72% of cases) for our providers. Where the end time of the break was not documented, the mean lunch break duration (30 min, based on 1,998 documented breaks) was substituted (presumed for breaks occurring between 11:00 AM and 1:30 PM, which is when lunch is offered). For breaks outside this period with a missing end time, the duration was set at the mean duration of such breaks (*i.e.*, 15 min, based on 2,776 documented breaks).

Each day was divided into 1,440 1-min intervals, during each of which the total number of providers who were busy was determined. We considered anesthesiologists to be occupied in tasks that cannot be preempted (*i.e.*, unable to leave the patient being cared for) during the periods listed in table 2. For each day, the number of anesthesiologists who were occupied as specified was determined during each 1-min interval.

Table 3 lists the physiologic events (hypoxemia, hypotension, and hypertension) considered critical portions of cases. The physiologic event definitions were based on published manuscripts demonstrating adverse outcomes and represent prolonged alarm conditions, as opposed to transient or false alarms. The duration of each such event corresponded to when the threshold for the critical event occurred (*e.g.*, after 10 min with systolic blood pressure less than 70 mmHg), until when the alarm trigger no longer was in effect (*e.g.*, systolic blood pressure ≥70 mmHg). The events we included deliberately underestimated the critical portions of cases to take a conservative approach with respect to the incidence of supervision lapses, increasing the chance of rejecting Hypothesis 1 (discussed in the Statistical Methods section). For example, a blood pressure of 220/140 lasting 20 min during a case scheduled for 1 h was not classified as a critical physiologic event in our analysis, although such instances would almost certainly trigger a call to the supervising anesthesiologist. The same goes for a systolic blood pressure of 75 in a patient undergoing carotid endarterectomy, or a

‖ The data interval was selected to allow binning by 13 4-week periods and to include a representative sample of anesthesia residents at all levels of training. A year of data was required to produce a confidence interval of 1 min, making survey methods to determine the anesthesia release time impractical.

Table 1. Data Obtained from Cases

Definition	Event
Start time of continuous presence of the anesthesia care provider	Anesthesia begin
Handoff time of the patient to the recovery room or intensive care unit nurse	Anesthesia end
Time patient entered the out-of-OR location if a neuraxial or regional anesthetic was performed in this location prior to entering the OR	Enter block room
Time when the patient left the out-of-OR location, if applicable	Leave block room
Time when the patient stretcher entered the OR	Enter the OR
Time when the patient stretcher left the OR	Leave the OR
Time when the patient was turned over to the surgical team for prepping and draping	Anesthesia release
Time of insertion of the tracheal tube, laryngeal mask airway, or other airway device for patient ventilation	Intubation
Time that surgery began	Surgery begin
Time that surgery ended	Surgery end
Time when patient was turned from supine to prone, or vice versa	Position change
Time when a brief break or lunch relief started	Break/lunch start
Time when a brief break or lunch relief ended	Break/lunch end
Time when an arterial or central venous catheter was placed	Invasive line placement
Where surgery was performed	Case location
Time reserved in the OR scheduling system for the case	Scheduled case duration
Recorded in years	Patient age
Intravenous, including emergency category	ASA physical status
General, neuraxial, regional, converted to general, monitored anesthesia care	Type of anesthesia
True if the patient entered the OR prior to 8:00 AM	First-case start

ASA = American Society of Anesthesiologists; OR = operating room.

progressive drop in oxygen saturation measured by pulse oximetry from 100% to 90% in a patient undergoing robotic prostatectomy. Our approach was also conservative because there are other physiologic perturbations where the anesthesiologist would likely be notified that we did not include (*e.g.*, ST segment depression, hypercapnia not responding to an increase in minute ventilation, or runs of supraventricular tachycardia). In addition, we did not include "false alarm" conditions (*e.g.*, disconnection of an electrocardiogram electrode, kinking of the blood pressure tubing, or plugging of the capnograph sampling tubing) that may generate a call to the attending to help troubleshoot and/or resolve the problem.

For each minute of the day, we determined the total number of critical portions of cases that occurred simultaneously (fig. 1). For example, if at 8:40 AM there was a patient being extubated, a patient ready for induction of general anesthesia, and a patient with hypoxemia due to severe bronchospasm, there would be three critical portions of cases in the interval from 8:40:00 AM to 8:40:59 AM. Consequently, the total number of providers needed would equal the number of ORs with cases running plus three anesthesiologists.

Statistical Methods

Hypothesis 1. For each minute of each workday excluding Thursdays, the running minimum number of anesthesia providers during overlapping 5 min was calculated (*i.e.*, to determine the number of ORs with cases). Thursdays were excluded because the OR starts 1 h later on this day and we were assessing supervision as a function of time of day. Over the same overlapping intervals, the minimum number of simultaneous critical portions of cases was calculated (*i.e.*, to determine the number of anesthesiologists needed). For each workday, the number of ORs was calculated as the maximum of the running minimums of the number of simultaneous providers. The number of anesthesiologists needed daily was the maximum of the running minimums of simultaneous critical portions of cases. The ratio of the number of ORs to number of anesthesiologists needed was then calculated for each day. This was most commonly simply 24 ORs divided by the maximum number of anesthesiologists needed for at least 5 min. For hypothetical ratios from 1.0 to 3.0 (*i.e.*, one anesthesiologist supervising from one to three ORs), the percentage of workdays for which the daily ratio was smaller was calculated. The use of overlapping 5-min intervals deliberately resulted in underestimation of this ratio (*i.e.*, increasing the chance of rejecting Hypothesis 1). For the ratio of 2.0, the lower 95% confidence limit was calculated for the percentage of workdays for which at least one supervision lapse would have occurred. The 95% confidence interval (CI) was calculated using the method of Blyth-Still-Casella (StatXact-9, Cytel Software Corporation, Cambridge, MA).

Hypothesis 2. For each minute of each of the 202 workdays, excluding Thursdays, the total number of providers needed was calculated = provider in the operating room + anesthesiologist (if a critical portion of a case occurred) + and person on break (if applicable). Next, for each workday, the minute of the day with the largest total number of providers was calculated. That minute was then classified as "first case" if it occurred at 8:00 AM or earlier, otherwise "morning" if before 10:56 AM, otherwise "lunch" if before 1:31 PM, and otherwise "afternoon." We calculated the percentage of days for which a minute at or before 8:00 AM had the largest total number of providers for the day, along with the 95% lower confidence

Table 2. Tasks Considered as Critical Portions of the Anesthetic

Event	Start	End	Rational
Induction of GA	Enter the OR	Intubation or equivalent + 3 min	Participate in the preoperative briefing along with the surgeon, supervise induction of general anesthesia and securing of airway, check patient positioning
Postincision after regional or neuraxial block	Surgical incision	Surgical incision + 2 min	If block is inadequate, general anesthesia will be needed
Invasive line placement following induction of GA	Intubation	Until first physiologic data are recorded in the AIMS from the invasive line	Regulatory requirements related to billing for invasive lines
Turning patient between supine and prone	Position change time: 3 min	Position change time + 5 min (supine to prone) or 3 min (prone to supine)	Watch lines and airway to ensure that they do not become dislodged during the flip, ensure safe positioning following the flip. Prone positioning is more involved that returning patient to the supine position, so extra time was allocated
Neuraxial block supervision prior to entering the OR	Enter the OR–11 min*	Enter the OR	Participate in the timeout and supervise the block
Neuraxial block after entering the OR	Enter the OR	Enter the OR + 11 min*	Participate in the timeout and supervise the block
Regional block for postoperative analgesia placed in block room	Enter the OR	Enter the OR: 24 min†	Participate in the timeout and supervise the block
Emergence from GA	Extubation time	Extubation time + 3 min	Assess readiness for extubation, assess adequate ventilation after extubation

* Mean time from entering the block room to documentation that the spinal or epidural had been placed was 11 min, SD = 9 min (n = 1,759). † Mean time from entering the block room to documentation that the regional block was placed was 23.8 min, SD = 21.8 min (n = 962).

AIMS = anesthesia information management system; GA = general anesthesia; OR = operating room.

limit. We tested whether the percentage exceeded half (*i.e.*, most) of the days. The calculations were performed twice, once with ties for the time of the day being assigned to the earlier time of day and once to the later time of day. For example, if the daily maximum of 35 anesthesia providers were needed on a day both at 7:58 AM and at 8:02 AM, then first the maximum would be attributed to the 7:58 AM "first case" and next attributed to the 8:02 AM "morning." The calculations were also repeated using anesthesiologists' critical portions instead of the total number of providers needed.

Table 3. Evidence-based Physiologic Events Considered as Critical Portions of Cases

Event	Definition	Reference
Hypoxemia	Spo_2<90% for 2 min	Ehrenfeld *et al.* 2010[29]
Tachycardia	Median HR >110 for 5 min	Reich *et al.* 2002[30]
Hypotension	Median systolic BP <70 over 10 min	Reich *et al.* 2005[31]
Hypertension	Median systolic BP >160 over 5 min and scheduled procedure length >2 h	Reich *et al.* 2002[30]

Patients younger than 18 yr were excluded in the published outcome studies for tachycardia, hypotension, and hypertension. Using the methodology described for Hypothesis 3, fewer than 20% of the minutes of critical portions (table 2 and 3) were accounted for by minutes with the above physiologic events ($P < 0.0001$, mean 14.7%, SE 0.5%). Excluding physiologic events occurring during critical portions (table 2) reduced the percentage to 13.8% (SE 0.4%).

BP = blood pressure; HR = heart rate; Spo_2 = oxygen saturation, measured by pulse oximetry.

Hypothesis 3. For all combinations of the 253 workdays and OR first cases of the day, the time from each OR entrance to anesthesia release was known from the anesthesia information management system data. The probability distribution of the n = 5,769 times to release were not normally distributed with or without inverse squared, inverse, inverse square root, logarithmic, square root, or squared transformations of the release time durations (all Lilliefors tests $P < 0.00001$, Systat 13, SYSTAT Software, Chicago, IL). Therefore, the mean was taken for each day. The 253 means followed a normal distribution (Lilliefors test $P = 0.42$). The means had neither statistically significant Pearson auto-correlation from 1 day to the next (Pearson r = −0.01, $P = 0.94$) nor from 1 week to the next (r = 0.11 $P = 0.08$). Therefore, the 95% two-sided CI for the mean release time was calculated using the Student *t* distribution, with the sample size being the 253 workdays. Similarly, the overall mean was compared

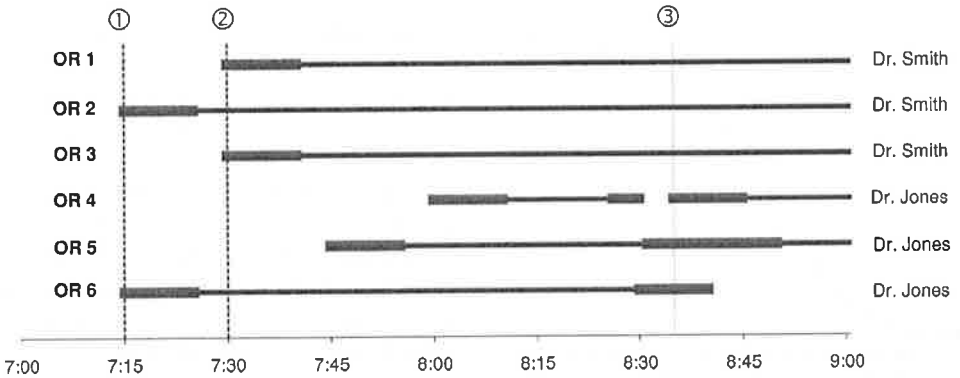

Fig. 1. Example of overlapping critical portions of cases. Critical portions of cases are noted by the *thick red lines*, and other portions by the *thin green lines*. During critical portions of cases, a supervising anesthesiologist would be expected to be present. A six operating room (OR) suite is staffed by two anesthesiologists, Drs. Smith and Jones. Dr. Smith is medically directing ORs 1 to 3 and Dr. Jones ORs 4 to 6. At time 1 (7:15), induction takes place in OR 2 and 6, staffed by the two anesthesiologists in their own rooms with no lapse in supervision. At time 2 (7:30), Dr. Smith has two cases to induce in OR 1 and 3, but Dr. Jones is available and performs the simultaneous induction in OR 3, preventing a lapse in supervision. At time 3 (8:35), Dr. Jones is helping treat a patient with hypoxemia and severe bronchospasm in OR 5, and Dr. Smith is cross-covering the extubation of the patient in OR 6. The patient in OR 4 has to wait for induction, as both anesthesiologists are busy. There has been a supervision lapse due to the occurrence of three simultaneous critical portions of cases.

with the anesthesia release time of 22 min determined at Yale-New Haven Hospital[21] using Student one group two-sided *t* test.

Results

Hypothesis 1: Staffing Lapses

The percentage of days during which there would have been at least one 5-min interval with too few anesthesiologists to supervise all critical portions of cases at varying ratios of ORs to anesthesiologists is shown in figure 2. Even at a ratio of 1:2, there would have been at least one such lapse in supervision for 35% of days (lower 95% confidence limit = 30%). At a ratio of 1:3, there would be supervision lapses on 99% of days (lower 95% confidence limit = 96%).

Extrapolating from figure 5b of the French simulation study[19] with 24 ORs, a staffing ratio of 1:2, and one additional floater anesthesiologist (*i.e.*, effective supervision ratio of 1:1.8), the expected incidence of supervision lapses is 12%. We observed a 12% incidence with a supervision ratio of 1:1.7.

The first hypothesis that supervision lapses would take place on one-third of days and that our results would be similar to the simulation study was confirmed.

Hypothesis 2: Time of Day with Largest Number of Providers Needed

The average peak activity (total providers needed) during cases occurred at the start of the workday for most days (fig. 3, table 4, $P < 0.0001$). This was especially true for critical portions of cases (*i.e.*, times that would influence anesthesiologist staffing; table 3). The second hypothesis was confirmed.

Hypothesis 3: Anesthesia Release Time

The mean number of minutes of critical portions of first-case starts was 22.2 min (95% CI 21.8–22.8 min, SD 2.8 min). This observation matched observational findings reported previously from Yale-New Haven Hospital[21] ($P = 0.29$). Thus, the third hypothesis that the mean number of critical minutes for first-case starts would match the anesthesia release time measured by observers[21] was confirmed.

Effect of Providing Higher Supervision Ratios or Staggered First-case Starts on Supervision Lapses

Because the three hypotheses were satisfied, as a sensitivity analysis, we examined the effect on supervision lapses of either lowering the supervision ratio from 1:2 at the start of the day to 1:3 after first cases had begun or supervising at a 1:3 ratio throughout the day with staggered first-case start times. The former strategy would be possible only if there were anesthesiologists with nonclinical assignments (*e.g.*, academic institutions), whereas the latter approach could be instituted anywhere. When critical portions of cases occurring at or before 8:00 AM and breaks were excluded, at least one supervision lapse would occur on 14% of days at the 1:3 supervision ratio (95% lower confidence limit = 10%). However, when breaks were included, supervision lapses increased to 62% of days (95% lower confidence limit = 56%; fig. 4). The breaks affecting the maximum supervision ratio were principally lunch reliefs (see fig. 2 and table 4). These findings indicate that at a 1:3 supervision ratio, additional providers (*e.g.*, certified registered nurse anesthetists) would be needed to provide breaks. In contrast, if supervision were maintained at 1:2 throughout the day, there would be supervision lapses on only 0% and 2% of days, excluding and including breaks, respectively. Thus, additional providers would not be necessary at a 1:2 supervision ratio. Overall, the

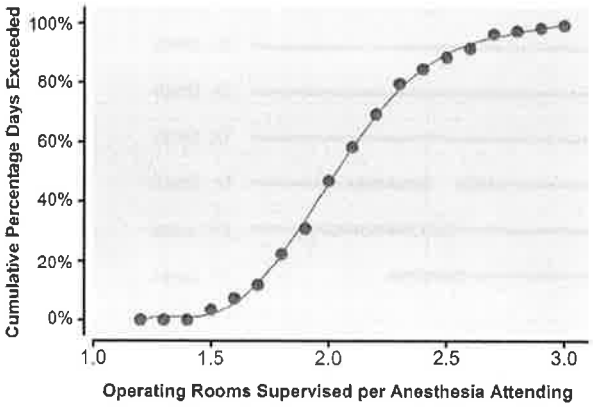

Fig. 2. Risk of supervision lapses based on number of rooms supervised by each anesthesiologist. A supervision lapse is defined as a critical portion of a case (see tables 1 and 2) where there are insufficient anesthesiologists available. For each of the 202 weekdays (excluding Thursday, when the operating room [OR] starts late) in the study interval, the minimum number of providers busy during the five previous 1-min intervals was calculated for each minute of the case. The maximum of this series equals the number of ORs that were running simultaneously at any point in the day (typically 24, but occasionally smaller if any OR were closed for the day). Similarly, the minimum number of critical portions during consecutive overlapping 5-min intervals was determined. The maximum of this series equals the number of anesthesiologists required to supervise all critical portions of cases. The ratio of maximum rooms divided by maximum anesthesiologists was then computed for each day. The value on the y-axis corresponds to the cumulative probability among the 202 days where the ratio listed on the x-axis would be exceeded for at least one interval during the day. For example, suppose each anesthesiologist is supervising two rooms, then on 35% of days, there would be at least one interval when a supervision lapse would occur.

financial benefit of decreasing the supervision ratio from 1:2 to 1:3 is offset by the need for additional nonanesthesiologist providers.

Discussion

In this study, we confirmed results of the French simulation study,[19] showing that even at a supervision ratio of one anesthesiologist for every two anesthesia providers, all simultaneous critical portions of cases could not be supervised on one-third of days without occasionally waiting for the anesthesiologist. We also confirmed that the largest number of providers is needed at the start of the day, and that is also when there was the highest incidence of critical portions of cases. The mean anesthesia release time (22 min) we measured was close to that measured at Yale-New Haven Hospital.[21] That time represents the average expected delay in starting the second case when an anesthesiologist has two patients who are ready for induction simultaneously and there is not another anesthesiologist who is available to cross-cover.

Our findings and the simulation results[19] are in contrast to the study of Wright *et al.*,[23] which found that cases with a start time after 3 PM had the highest proportion of adverse events. We obtained different results because our focus was on the time of the day with the largest total number of critical portions among all ORs. Wright *et al.* [23] considered when each individual case had the highest risk.

Administrators who want to reduce their anesthesia group's costs[24] by encouraging them to decrease their anesthesiologist supervision ratios need to consider the effect of our findings on the timeliness of first-case starts, which is often a major institutional focus.[11,12] At a ratio of one anesthesiologist to three anesthesia providers, it will not be possible to start all ORs simultaneously and have sufficient anesthesiologists to supervise all critical portions of cases on most days. Either the administrators will need to accept the fact that the additional OR often will be delayed from its scheduled start time, or agree to rearrange the OR schedule so that first cases supervised simultaneously by each anesthesiologist will have staggered start times.[20] The former approach can lead to discontent, because such delays are publicly visible.[25] The use of staggered starts has a built-in expectation that some ORs will start later than other ORs. For some organizations this may be advantageous (*e.g.*, surgeons running multiple ORs or who simply prefer to start somewhat later than the "official" start time may embrace this change). Provided the ORs selected for the staggered start times[20] are those with the most expected underutilized OR time, this has no economic disadvantage.[12,13,26,27]

Another potential approach to the problem of supervision lapses during first cases of the day is for the anesthesia group to make additional anesthesiologists available at the start of the day. Then, once the ORs have been started, some of these individuals are released to perform other duties important to the department (*e.g.*, research, informatics, and management and administrative duties). The importance of Hypothesis 2 is in knowing that lunch breaks are not the bottleneck; rather, it is the first case starts that must be considered economically.[12,24] However, the importance of our sensitivity analysis is in showing that this approach then necessitates adding additional nonanesthesiologists for breaks, which may nullify the economic benefit.

The fact that some organizations do not routinely provide breaks is not a limitation of our study to such practices, because our results of the importance of the start of the workday with respect to the peak incidence of staffing lapses would then be even *stronger*. Similarly, the fact that we studied a tertiary hospital with many long cases rather than an outpatient surgery center with short cases is not a limitation because, from the simulation study,[19] our results would be even stronger for short cases. Instead, the principal limitations of our study relate to the definitions of critical portions of anesthetics. Although we relied on process times recorded in an anesthesia information management system, such times

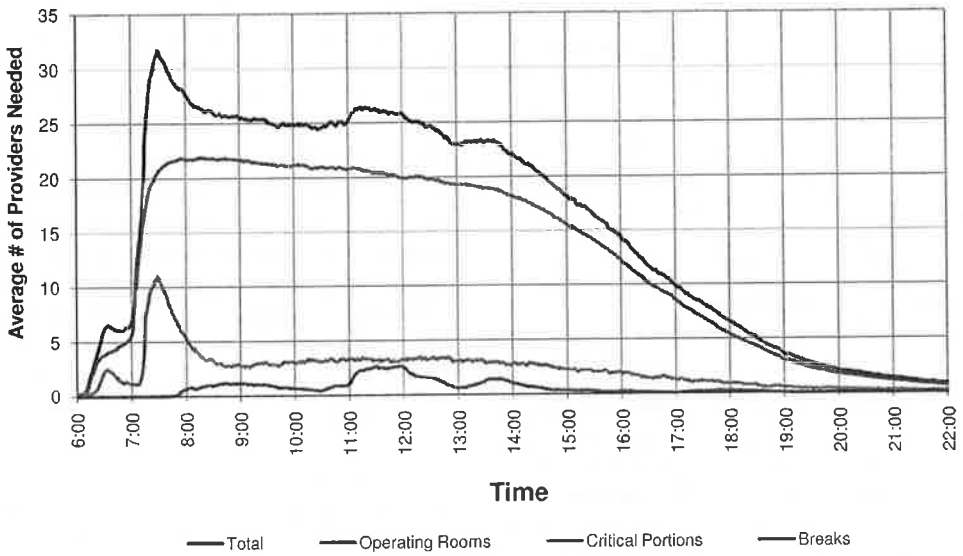

Fig. 3. Average daily workload by hours of the day. During each hour of the workday between 6:00 AM and 11:00 PM, the average numbers of staff required (providers, anesthesiologists, and break personnel) were determined. Operating rooms (*green line*) equals the number of providers, and critical portions (*red line*) are as defined in tables 1 and 2, indicating the number of supervising anesthesiologists required. Breaks (*purple line*) represent staff relieving providers for lunch and bathroom breaks. The total number of providers needed (*blue line*) is the sum of the other three quantities. The peak activity occurred at 7:30 AM, as did the number of critical portions of cases. Some operating rooms have scheduled start times of 6:30 AM and others at 7:30 AM, based on surgical specialty; this has no bearing on the results.

recorded by nurses in an operating room information system could be used equivalently, as shown by Sandberg *et al.*[28]

During our analysis, we assumed, as did Paoletti and Marty,[19] that any anesthesiologist can go into any OR when a critical portion of the case occurs and provide supervision equivalent to the anesthesiologist who is otherwise occupied and cannot be interrupted. If complex patients are involved or an extended discussion about management has taken place, such substitution may provide suboptimal patient care. To the extent that all anesthesiologists are not equivalent and thus not able to supervise every critical portion of cases (*e.g.*, a patient to receive a regional block that the available anesthesiologist does not feel qualified to perform), the percentage of days with a lapse in supervision

Table 4. Percentages of n = 202 Days for which the Time of Day Had the Largest Total Number of Providers and/or Critical Portions for Any Minute of the Day

Time of Day	First Case*	Morning†	Lunch‡	Afternoon§
% Days with ties assigned to the earliest minute of day with the maximum total number of providers for the day	78% (n = 157) $P < 0.0001$ 95% CI >73%	11% (n = 23)	10% (n = 20)	1% (n = 2)
% Days with ties assigned to the latest minute of day with the maximum total number of providers for the day	69% (n = 140) $P < 0.0001$ 95% CI >64%	11% (n = 23)	18% (n = 36)	1% (n = 3)
% Days with ties assigned to the earliest minute of day with the maximum critical portions for the day	99% (n = 199) $P < 0.0001$ 95% CI >96%	0% (n = 1)	1% (n = 2)	0% (n = 0)
% Days with ties assigned to the latest minute of day with the maximum critical portions for the day	96% (n = 193) $P < 0.0001$ 95% CI >93%	2% (n = 5)	2% (n = 4)	0% (n = 0)

The *P* value tests whether the proportion is greater than half.

* First case = in the operating room after 6:30 AM through 8:00 PM. † Morning = in the operating room after 8:00 AM through 10:55 AM. ‡ Lunch = in the operating room after 10:55 AM through 1:30 PM. § Afternoon = in the operating room after 1:30 PM.

CI = confidence interval.

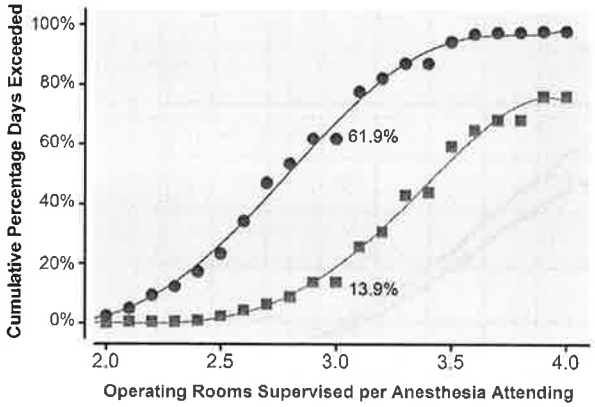

Fig. 4. Risk of supervision lapses excluding critical portions of cases on or before 8 AM. This graph was constructed as described in the legend for figure 2, with the exception that critical portions of cases occurring on or before 8 AM were excluded. Excluding supervision lapses during first-case starts represents a strategy of either staggering the start times of first cases or providing additional anesthesiologists at the start of the day. The *blue circles* and *regression line* represent the cumulative percentage of days with at least one supervision lapse when lunch reliefs and breaks after 8 AM were excluded. The *red squares* and *regression line* represent the cumulative percentage of days with at least one supervision lapse when lunch reliefs and breaks after 8 AM were included. The large increase in staffing lapses at a supervision ratio of 1:3 (13.9%–61.9%) indicates that additional staff would need to be present if lunch relief is to be provided. At a supervision ratio of 1:2, minimal additional staff would be needed, because the increase in days with staffing lapses is small (0% to 2%). Thus, the potential financial benefit of reducing the anesthesiologist staffing ratio will be offset by the need to provide additional providers for lunch relief.

with a 1:2 supervision ratio would be even larger than the observed 35%.

There are aspects of our analysis related to our definitions of critical portions of cases (tables 1 and 2) that could result in some readers viewing our conclusions as too conservative. Several of our colleagues offered feedback that they do not think that it is necessary for the supervising anesthesiologist to be physically present for induction or emergence in straightforward cases with experienced certified registered nurse anesthetists, as long as they are immediately available. The extent to which anesthesiologist presence is required during and soon after the anesthesia release time varies highly among countries because of varying regulatory requirements and within countries among institutions (*e.g.*, depending on local requirements for participation in the preoperative briefing). Because the intraoperative briefing including the surgeon and all anesthesia providers reduces mortality,[18] likely its inclusion will be increasingly prevalent.

In summary, we showed that the start of the OR day is the period of time when the anesthesiologist supervision requirement is greatest. Even with lunch breaks included, this result is so robust that changes in the anesthesiologist supervision ratio can be described to administrators simply in terms of the effect on first-case starts. This finding is useful because the psychology of first-case starts is already understood (*e.g.*, how they are interpreted economically).[11] Decreasing the supervision ratio by anesthesiologists from 1:2 to 1:3 will have a great effect on the timeliness of the start of the first cases of the day due to the high incidence of simultaneous critical portions of cases peaking at that time. As the economics of first-case starts are also fully developed, the decision to stagger first- case starts appropriately[11–13,26,27] *versus* having more anesthesiologists can be modeled for each facility.[11,12,24] Unless one of these options is chosen, the consequence will be a marked increase in the incidence of supervision lapses.

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Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301
Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee: Feb 20, 2015

The American Society of Anesthesiologists (ASA) and the Oregon Society of Anesthesiologists (OSA) intend to supplant certified registered nurse anesthetists (CRNAs) with lesser skilled providers (Anesthesia Assistants) or (AAs), who are clinically and financially dependent and under the control of anesthesiologists.

I have worked side by side with anesthesiologists, CRNAs, and I have supervised anesthesia residents and student nurse anesthetists throughout my career. Given my experience, I fully trust both anesthesia training programs to graduate well-educated, diligent, safe anesthesia providers capable of making sound clinical decisions in demanding circumstances. Before anesthesia providers become capable they spend years under the guidance of board certified MD and CRNAs. Having been in the position of overseeing the development of anesthesia trainees I know the inherent challenges and potential dangers. Even these highly educated and qualified trainees demand close attention and scrutiny throughout their years of clinical training.

Recognizing these difficulties, current federal standards require an Anesthesiologist supervise no more than two trainees at any given time. In fact, those same standards dictate anesthesiologists cannot supervise more than two operating rooms if even one of those rooms contains an anesthesia trainee. I do not see how it is possible to safely oversee 4 AAs at one time. And doing so would again set a new, lower anesthesia safety standard contrary to current standard of care and federal stipulations. In fact, an American Society of Anesthesiology review of one year of data from a tertiary care hospital reveals Anesthesiologist oversight of AAs resulted in lapses of supervision during critical portions of anesthetic cases even with a 1:2 supervision ratio.

Introduction of AAs into Oregon will increase risk to our patients. I do not believe anesthesia assistant training programs sufficiently qualify new graduates to provide safe anesthesia care. AA program graduates possess only 2 years of health sciences-related didactics and no direct patient clinical experience. In comparison, a year one anesthesia resident (i.e., an anesthesia trainee being supervised by an Anesthesiologist) will have completed 4 years of medical education including 3 years of direct

patient care before anesthetizing their very first patient. Likewise, CRNA's will have spent 4+ years studying in the Health Sciences and will have a minimum of 3 years directly caring for high acuity patients (e.g., ER, ICU) prior to their first day providing anesthesia as a trainee. Therefore, our current MD and CRNA anesthesia training programs, which have well-established safety records, require roughly twice as much education and clinical experience as do Anesthesia Assistant program before they are allowed to anesthetize their first patient even under the direct supervision of a board certified Anesthesiologist. This essentially sets a new, lesser training standard which has no evidence supporting such a change. If we are to deviate from current practices, which have hard evidence for patient safety under the care of Anesthesiologists and CRNAs, practicing independently, or Anesthesia residents and student Nurse Anesthetists, under the direct supervision of an Anesthesiologist, then it becomes absolutely necessary to prove the safety of such deviations. To date, AAs have no proven outcome data to support their practice as there are no peer-reviewed studies in scientific journals demonstrating AA safety or quality of care.

I feel strongly that HB 2295 represents a decrement in the standard of education for anesthesia providers, and lowers the quality of care that patients will receive from a clinical anesthesia perspective. I implore you to carefully consider the impact this legislation will have on the care your constituents can expect to receive when they are in need of anesthesia services.

Best regards,

Digitally signed by Craig W. Calhoun, MD
DN: cn=Craig W. Calhoun, MD, o, ou, email=calhouncw_md@comcast.net, c=US
Date: 2015.02.21 07:59:20 -08'00'

Craig Calhoun, M.D.
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Milwaukie, OR 97222

"In politics stupidity is not a handicap." : Napoleon Bonaparte

Oregon's legislators have a great chance to do the SMART thing. Before the committee is HB 2295, a bill that is NOT based on evidence, DOES NOT put the healthcare needs of Oregonians first and DOES NOT employ any common fiscal sense. Any legislative action based on self-serving statements of one professional group makes for the worse kind of statute law.

My critique of HB 2295 is to expose the **one reason** this bill is propagated by its proponents.

Contrary to the statements of the proponents of HB 2295; the facts are: Anesthesiologist's Assistants (AAs) do not increase anesthesia provider service in the areas where that are most needed, they do not increase access to care, they are not an effective anesthesia service model and they exist for one purpose only: to be employed by physician anesthesiologists to increase their revenue and curtail the practice of this state's first independent provider of anesthesia services.

Even the federal government recognizes the problems with AA's. The Centers for Medicare & Medicaid Services (CMS) regulations reject the backers of HB 2295 in their assertion that AAs and Certified Registered Nurse Anesthetists (CRNAs) have "identical clinical capabilities and responsibilities" or that the two professions are "equivalent." In fact, CMS recognizes critical differences between CRNAs and AAs.

A key difference is reflected in the CMS Conditions of Participation (CoP) for hospitals and ambulatory surgical centers that **require AAs to work under anesthesiologist supervision**. In contrast, those conditions of participation generally require that CRNAs work under physician supervision, but allow CRNAs to work without physician supervision in states that have opted out of the CMS physician supervision requirement. What this means is … CMS **DOES NOT EVER** require anesthesiologist supervision of CRNAs, and in many states does not require ANY physician supervision of CRNAs. In fact, Oregon has **OPTED OUT** of the CMS physician supervision requirement for CRNAs.

Is it any wonder that anesthesiologists with ONLY an eye to their monetary gain would promote AAs rather than CRNAs, given that CMS requires AAs to work directly under anesthesiologists?

Arkansas legislators have recently defeated an attempt to promote AAs regulation. In Louisiana, AA's are forbidden to practice by state law.

Quality of Anesthesia Care Issues

CRNAs have been studied extensively throughout their long history (125+ years), and numerous studies show that they deliver excellent quality care. In fact, a study published in 2007 demonstrated that there is no difference in obstetrical anesthesia safety between hospitals that use only (CRNAs) and those that use only anesthesiologists. (See "Anesthesia Staffing and Anesthetic Complications During Cesarean Delivery," at the Nursing Research Online website www.nursingresearchonline.com.)

In administering 27 million anesthetics annually nationally, the over 350 Oregon CRNAs have had a large part in helping to compile an enviable safety record. No studies to date that have found that there is any significant difference in patient outcomes based on whether the anesthesia provider is a CRNA or an anesthesiologist.

The Importance of a Critical Care Nursing Background

The American Academy of Anesthesiologist Assistants (AAAA) literature says: "Program Description: Commission on Accreditation of Allied Health Education Programs (CAAHEP) guidelines for AA programs recommend, but do not appear to require, didactic and clinical content. In addition, CAAHEP guidelines for AA programs recommend,

but do not appear to require, a minimum number of anesthesia cases." "Didactic Education: CAAHEP standards and guidelines do not specify minimum hours for each core course or category of core courses" "Anesthesia Clinical Education: No minimum number of anesthesia cases required in CAAHEP accreditation criteria. Guidelines recommend 600 anesthesia cases. AA programs indicate that total clinical hours range from 2,000 to 2,747.

Published descriptions of the AA programs' total clinical hours include experiences such as learning to do physicals, taking patient histories, training and certification processes for life support training, and other learning experiences that a licensed professional RN has **already mastered prior** to nurse anesthesia program entry. In contrast, AAs are not required to have any nursing, medical, anesthesia or healthcare education, experience, licensure, or certification before they begin their programs.

I got this tidbit from the American Academy of Anesthesiologist Assistants: Clinical time is counted in hours including ANY hours not actually doing cases. Lunch breaks count, sitting around between cases count, learning what a BP cuff is in clinical counts etc. It makes a MASSIVE difference. Nurses in CRNA programs currently get 6000 hours but If CRNAs counted time like AAs we would be WELL into the 10000 range.

CRNAs are Professional Full-Service Anesthesia Providers

CRNAs are dedicated healthcare professionals who are experts in all aspects of anesthesia care. They are competent to provide services within their full scope of practice. They are not technicians or merely proceduralists. CRNAs are qualified to make independent judgments regarding all aspects of anesthesia care, based on their education, licensure, and certification. CRNAs provide anesthetics to patients in cooperation with surgeons, anesthesiologists, dentists, podiatrists and other qualified healthcare professionals. CRNAs practice with a high degree of autonomy. The laws of every state permit CRNAs to work with physicians (such as surgeons) or other authorized healthcare professionals.

CRNAs are capable of high-level independent function and receive instruction in the administration of all types of anesthesia including general and regional anesthesia, selected local and conscious sedation, monitored anesthesia care, and pain management. They are trained to provide anesthesia to patients of all ages for all types of surgery, from simple to the most complex cases. The ability to make independent judgments and provide multiple anesthetic techniques is critical to meeting an array of patient and surgical needs.

In contrast, the scope of training for AAs is severely limited. The AA curriculum is characterized by training that allows them to "assist" the anesthesiologist in technical functions. For example, one of the largest AA programs does not provide clinical instruction in the administration of regional anesthesia. All nurse anesthesia programs provide both didactic and clinical instruction in regional anesthesia, providing CRNAs with a solid professional foundation to administer regional anesthesia and handle regional anesthetic complications.

Practice Location

CRNAs practice in every setting in which anesthesia is delivered: traditional hospital surgical suites and obstetrical delivery rooms; critical access hospitals; ambulatory surgical centers; the offices of dentists, podiatrists, ophthalmologists, plastic surgeons, and other medical professionals; and U.S. Military, Public Health Service, and Veterans Administration healthcare facilities. CRNAs can provide anesthesia care anywhere it is needed, whether urban, rural or suburban.

AAs, in contrast, can only practice where anesthesiologists practice. In other words, they can only practice where anesthesiologists are on-site in the facility and available to provide close supervision. This requirement of anesthesiologist supervision precludes AAs from helping to solve problems of inadequate access to anesthesia care in rural and underserved communities. CRNAs, in contrast, are the main provider in these communities. In Oregon, CRNAs are the sole providers in nearly 95 percent of this state's rural hospitals.

There will never be a study which shows a difference in outcomes between CRNAs and AAs. There cannot be one. The reason is because an AA can NEVER work independently so they can never be evaluated on the same level as CRNAs.

Summation/Conclusion

CRNAs are better qualified by far to provide quality anesthesia services than AAs. CRNAs are better prepared, have a superior breadth of clinical experience, and can be utilized more flexibly. There is no comparison between CRNAs and AAs in terms of education, experience, history, ability to work without physician anesthesiologist supervision, recognition by surgeons, and presence as the predominant anesthesia provider in the military. It is in the best interests of Oregon's healthcare system to support CRNAs, encourage Oregon's own Nurse Anesthesiology program (OSHU) and kill HB 2295.

Simply put:

*AAs **do not** increase flexibility to serve the Oregonians with the most need, i.e. rural critical access facilities.

*AAs **do not** increase access to care in Oregon

*AAs are **not** the most cost effective model anywhere

*Oregon **does not have a provider shortage** anywhere that AAs will be able to work

*HB 2295 accomplishes only **one** objective: The ability to increase the financial gain of physician anesthesiologists that employ AA's while decreasing Oregonians opportunity to have their care performed by an experienced licensed independent anesthesia expert.

Sincerely,

Robert Bland, CRNA

Senior Nurse Anesthetist

VA Roseburg HCS
541-530-9894

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

19 February, 2015

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

I am the Medical Director of a free standing, Oregon State licensed and AAAASF certified ASC for more than 30 years and I am writing this letter **in opposition of HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

This legislation will result in the **replacement of much more highly qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are prohibited from the independent delivery of anesthesia care in the fast-paced environment of the operating room. Passage of this bill would then have the unintended result of placing the safety of anesthetized Oregonians at risk.** The proven track record of our established model of care makes the patient experience safer, more accessible and less expensive than the dangerous proposal outlined in HB 2295.

Because CRNAs are trained to operate independently, more than 80% of Oregon's rural communities are served by them. HB 2295 will limit access to that medical care. I have closely worked with CRNA's for the delivery of anesthesia care both in my service in the USAF and in private practice for more than 30 years without a single untoward event.

My patients' physical safety is critical to their health-care outcomes. I do not feel comfortable with an "assistant" watching over them during critical moments of surgery. There are many times when an Anesthesiologist is not immediately available to direct their work or intervene in an emergency because their attention is needed with another anesthetized patient.

The independent CRNA or collaborative Anesthesiologist/CRNA model currently employed in Oregon provides a safe, accessible, and cost-effective model of care. Please don't put Oregonians at risk by changing our current anesthesia delivery system. **Please vote no on HB 2295.**

Very Respectfully,

Bruce Carter MD FACS
Oregon Plastic Surgeons
875 Oak Street SE, Suite 4060
Salem, Oregon 97302
bcarter@bcartermd.com

ORANA
OREGON ASSOCIATION OF NURSE ANESTHETISTS

Testimony in Opposition to HB 2295

Before the House Committee on Health Care

Christina Cowgill, CRNA, MNA
Director of Government Relations,
Oregon Association of Nurse Anesthetists (ORANA)

February 25, 2015

OREGON DOES NOT NEED ANESTHESIOLOGIST ASSISTANTS (AAs)

Certified Registered Nurse Anesthetists (CRNAs) are well-established, proven- safe and cost-effective anesthesia providers.

CRNAs have been caring for Oregonians for more than 100 years and continue to grow in number.The first school of nurse anesthesia in the *country* was established at Portland's St. Vincent Hospital more than a century ago, and Oregon still educates CRNAs today with a program at OHSU.

Anesthesiologist Assistants (AAs) are rare in the U.S. (about 1,800 nationwide compared with more than 47,000 CRNAs) and possess a limited scope of practice that would not promote access to healthcare or maintain a cost-effective anesthesia care model in Oregon.

AAs' limited scope of practice, which prohibits them from practicing without anesthesiologist supervision, would prevent them from practicing in Oregon's underserved rural areas.

ACCESS TO CARE IN OREGON

CRNAs provide anesthesia care anywhere it is needed in both rural and urban settings. CRNAs practice in every setting, including hospital surgical suites and obstetrical delivery rooms, critical access hospitals, ambulatory surgical centers; the offices of dentists, podiatrists, ophthalmologists, plastic surgeons, as well as U.S. Military and Veterans Administration healthcare facilities.

In contrast, AAs offer:

- **LIMITED UTILIZATION:** Because AAs cannot practice without anesthesiologist supervision, AAs do not practice in rural areas where CRNAs working without anesthesiologist involvement are the primary providers of anesthesia care. The AA model's focus, i.e. on only practicing where anesthesiologists practice, greatly limits their utilization. Thus, AAs cannot help solve problems of inadequate access to anesthesia care in rural and underserved communities.

- **FAILURE TO MEET DEMAND:** If for any reason an AA's supervising anesthesiologist is not available, the AA may not provide anesthesia care. The inflexible AA/anesthesiologist-driven mode of practice thus fails to adequately meet the needs of patients and healthcare providers.

- **NO PROVEN OUTCOME DATA:** There are no peer-reviewed studies published in scientific journals regarding the quality of care of AA practice or AA anesthesia outcomes. AAs are explicitly recognized in state laws or regulations in only 13 states and the District of Columbia. Louisiana actually passed legislation that has the effect of prohibiting AA practice, declaring that "CRNAs receive a much higher level of education and training than do AAs."

Fawn Barrie, 503.580.5487 | Christina Cowgill, 503.501.8502
Lobbyist/Government Relations| www.oregon-crna.org

ORANA

OREGON ASSOCIATION OF NURSE ANESTHETISTS

EDUCATION/SCOPE OF PRACTICE

CRNAs are trained and educated to deliver anesthesia care regardless of anesthesiologist involvement. CRNAs are qualified to make independent judgments regarding all aspects of anesthesia care, based on their education, licensure, and certification. CRNAs have experience as critical care nurses and can assess and treat a broad range of health problems before even beginning anesthesia training.

In contrast, AAs offer:

• **LIMITED SCOPE OF PRACTICE:** AAs administer anesthesia solely under the medical direction of anesthesiologists. AAs thus have a much more limited scope of practice than CRNAs. AAs are NOT physician assistants (PAs).

• **NOT A FULL SERVICE ANESTHESIA PROVIDER:** The AA program curriculum trains AAs only to assist anesthesiologists in technical functions. One of the largest AA programs (at Emory University) does not even provide clinical instruction in the administration of nerve blocks and spinal/epidural anesthesia.

• **LACK HEALTH CARE EXPERIENCE:** AAs are not required to have any prior healthcare education or experience (e.g., nursing, medical, anesthesia or healthcare education, licensure, or certification) before they begin their AA educational programs.

ECONOMIC IMPACT

Independent studies have shown that CRNAs acting as the sole anesthesia provider is the most cost-effective model for anesthesia delivery. This model is used in many of our hospitals in rural communities and in our top rated critical access hospitals in Oregon. The second-most cost effective model is the CRNA/ anesthesiology care team model, which is similar to the well-established models used at Kaiser and OHSU.

In contrast, AAs offer:

• **COSTLY MODEL OF CARE:** With an AA model, two healthcare providers (a supervising anesthesiologist and an AA) must be utilized to provide anesthesia care to one patient.

• **DIFFICULTY WITH ANESTHESIOLOGIST SUPERVISON:** AAs must be supervised by anesthesiologists. The Society of Anesthesiology reports that even with an appropriate ratio of anesthesiologists to providers, lapses of supervision during critical portions of anesthetic cases would occur. In a review of one year of data from a tertiary hospital, supervision lapses occurred commonly during first-case starts even with a 1:2 supervision ratio.

OPPOSE HB 2295: Thank you

Fawn Barrie, 503.580.5487 | Christina Cowgill, 503.501.8502
Lobbyist/Government Relations| www.oregon-crna.org

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301
Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

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Recognizing these difficulties, current federal standards require an Anesthesiologist supervise no more than two trainees at any given time. In fact, those same standards dictate anesthesiologists cannot supervise more than two operating rooms if even one of those rooms contains an anesthesia trainee. I do not see how it is possible to safely oversee 4 AAs at one time. And doing so would again set a new, lower anesthesia safety standard contrary to current standard of care and federal stipulations. In fact, an American Society of Anesthesiology review of one year of data from a tertiary care hospital reveals Anesthesiologist oversight of AAs resulted in lapses of supervision during critical portions of anesthetic cases even with a 1:2 supervision ratio.

Introduction of AAs into Oregon will increase risk to our patients. I do not believe anesthesia assistant training programs sufficiently qualify new graduates to provide safe anesthesia care. AA program graduates possess only 2 years of health sciences-related didactics and no direct patient clinical experience. In comparison, a year one anesthesia resident (i.e., an anesthesia trainee being supervised by an Anesthesiologist) will have completed 4 years of medical education including 3 years of direct

patient care before anesthetizing their very first patient. Likewise, CRNA's will have spent 4+ years studying in the Health Sciences and will have a minimum of 3 years directly caring for high acuity patients (e.g., ER, ICU) prior to their first day providing anesthesia as a trainee. Therefore, our current MD and CRNA anesthesia training programs, which have well-established safety records, require roughly twice as much education and clinical experience as do Anesthesia Assistant program before they are allowed to anesthetize their first patient even under the direct supervision of a board certified Anesthesiologist. This essentially sets a new, lesser training standard which has no evidence supporting such a change. If we are to deviate from current practices, which have hard evidence for patient safety under the care of Anesthesiologists and CRNAs, practicing independently, or Anesthesia residents and student Nurse Anesthetists, under the direct supervision of an Anesthesiologist, then it becomes absolutely necessary to prove the safety of such deviations. To date, AAs have no proven outcome data to support their practice as there are no peer-reviewed studies in scientific journals demonstrating AA safety or quality of care.

I feel strongly that HB 2295 represents a decrement in the standard of education for anesthesia providers, and lowers the quality of care that patients will receive from a clinical anesthesia perspective. I implore you to carefully consider the impact this legislation will have on the care your constituents can expect to receive when they are in need of anesthesia services.

Best regards,

Lee Dorfman, D.O.
Anesthesiologist
Pearl Women's Center
140 NW 14th Ave
Portland, OR 97209

Testimony in Opposition to HB 2295

Emily Goerke, CRNA, MNA
Government Relations Committee, Chair
Oregon Association of Nurse Anesthetists (ORANA)

February 25, 2015

Chair Greenlick and Members of the Committee:

My name is Emily Goerke, I am a certified registered nurse anesthetist (CRNA), a native Oregonian, and the current ORANA government relations committee chair.

It is important for the committee members to understand that undergoing anesthesia is safer now than it has ever been. According to an article published (Nov. 2006) in *The American Surgeon:* "the Institute of Medicine's 1999 report, To Err is Human, "... anesthesiology has successfully reduced anesthesia mortality rates from two deaths per 10,000 anesthetics administered, to one death per 200,000 to 300,000 anesthetics administered."

CRNAs collaborate with surgeons, anesthesiologists, dentists, podiatrists, and other qualified healthcare professionals to deliver safe, high-quality, and cost effective patient care in virtually every healthcare setting. The excellent safety of record of CRNAs is reflected by their impressive malpractice insurance history. CRNA malpractice premiums have declined dramatically over the last 20 years despite a general rise in jury awards against healthcare professionals. The safe anesthesia care that CRNAs provide and associated anesthesia outcomes have been repeatedly demonstrated in peer-reviewed studies published in prominent journals.

HB 2295 has been brought to the healthcare committee for consideration which would allow Anesthesiologist Assistants (AA) to be licensed in the state of Oregon. There is no research to support, employing AAs in Oregon will improve safety for Oregonians undergoing anesthesia for surgical procedures. The AA profession was created in 1969 and currently there are only about 2000 AAs licensed to work in the United States (AAAA Past President Claire Chandler, testimony before Oregon HCC 12-13, November 20, 2013). Therefore, given the small number of AAs it is difficult to draw any definitive conclusions on their clinical safety.

In conclusion, given the lack of data that supports the safe practice of Anesthesiologist Assistants, myself and other CRNAs across the state of Oregon urge you to reject HB 2295. Please vote no on this bill. Thank you.

February 23, 2015

Attention: Chair Greenlick and Committee Members:

Oregon House, Committee on Health Care
Salem, OR 97301

Re: Oregon House Bill (HB) 2295:

Use of Anesthesiologist Assistants in Oregon

As a leader of Nurse Anesthetists at Columbia Anesthesiologists Group, I am writing today **in opposition to HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon. I have been a CRNA for 15 years and I have served in this administrative capacity for the past 7 months. As part of my position, I administer within an anesthesia care team practice alongside anesthesiologists. Our department provides the far spectrum of anesthesia care from day surgery to inpatient care, from laboring mothers to emergency surgery, and in endoscopy suites and remote areas within the hospital such as CT scan or MRI.

The other part of my job includes recruitment of CRNAs to join our practice. This an exciting time for Nurse Anesthetists in Clark County, WA. **For the first time in history, an all anesthesiologist group has elected to hire CRNAs to become part of their group in a care team model approach. It has been very successful for Columbia Anesthesia Group with a total of six full-time CRNAs hired within a year time frame. It gives our group tremendous pride to hire quality CRNAs and we are extremely selective in the hiring process.** Currently, we have a vast amount of applicants for jobs available and the applications continue to come to my email daily. OHSU has an educational program for CRNAs and provides us with a great resource for recruitment of highly qualified CRNAs. The graduates from this program easily fit into our team model and provide excellent anesthesia care.

Currently, there are no issues in the anesthesia workforce that I can see. We are very proud of our team approach and our ability to easily recruit CRNA from the community and retain a highly functioning anesthesia department.
Please vote no on HB 2295.

Respectfully,

Lisa Harrison, CRNA, MSNA

Feb 19, 2015

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

As a practicing Gastroenterologist at Silverton Hospital, I am writing this letter **in opposition of HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

This legislation will **put the lives of Oregonians at risk by replacing much more highly qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are unable to operate independently in the fast-paced environment of the operating room.** The proven track record of our established model of care makes the patient experience safer, more accessible and less expensive than the dangerous proposal outlined in HB 2295.

Because CRNAs are trained to operate independently, more than 80% of Oregon's rural communities are served by them. HB 2295 will limit access to that medical care.

My patients' physical safety is critical to their health-care outcomes. I can not trust an "assistant" watching over them during critical moments of surgery. There are many times when an Anesthesiologist is not immediately available to direct their work or intervene in an emergency.

The independent CRNA or collaborative Anesthesiologist/CRNA model currently employed in Oregon provides a safe, accessible, and cost-effective model of care. Please don't put Oregonians at risk by changing our current anesthesia delivery system. **Please vote no on HB 2295.**

Very Respectfully,

Roger Epstein, M.D.

Gastroenterologist
Silverton Hospital
342 Fairview St
Silverton, OR 97381

Testimony
Shawn DeRemer, MD

Opposition to
HB 2295

February 25, 2015

Mr Chairman and members of the House health care committee

My name is Dr Shawn DeRemer, I am the Executive Medical Director of Anesthesia Associates Northwest (AANW) at 6400 se Lake Rd. suite 130 Portland, Oregon 97222. I am a board certified anesthesiologist residing and practicing in the state of Oregon. I am here before you today in order to urge you to **oppose House Bill 2295**. I believe this legislation is unnecessary, will increase the cost of anesthesia care to our patients, and is politically motivated by those opposed to CRNA practice. I am adamantly opposed to this bill for the following reasons:

ANESTHESIOLOGISTS SEEK TO SUPPLANT CRNA'S WITH AA'S

The American Society of Anesthesiologists (ASA) and the Oregon Society of Anesthesiologists (OSA) intend to supplant certified registered nurse anesthetists (CRNA's) with lesser skilled providers (Anesthesia Assistants) or (AA's) who are clinically and financially dependent and under the direct control of anesthesiologists.

As one might imagine, anesthesiologists are eager to maintain the relatively monopolistic position they have historically attempted to engender within the anesthesia market from a patient access and financial perspective. By establishing, and promoting Anesthesia Assistants they hope to undermine and/or curtail independent CRNA practice in the market place. Endorsing HB 2295 (Anesthesia Assistant practice in Oregon) has significant implications relating to CRNA practice in Oregon. This legislation will increase the cost of anesthesia care to Oregonians, have a negative net impact on anesthesia access, and denigrate the anesthesia market with a redundancy of less qualified providers.

- AA's cannot practice independently and represent an unnecessary redundancy of providers (anesthesiologist plus AA) caring for a single patient thereby directly increasing cost. Crafting of any legislation which allows anesthesiologists to supervise anesthesiology assistants (AA) in ratios exceeding 1:1 simply promotes scenarios where-by anesthesiologists are physically unable to be immediately available to their AA's for all critical portions of a surgical procedure. Any attempt to circumvent this strict statute lends itself to gross inefficiencies in the work place and is the antithesis of customer service in this current healthcare climate.

Testimony **Opposition to**
Shawn DeRemer, MD **HB 2295**

- Because AA's cannot practice without anesthesiologist supervision, AA's do not practice in rural areas where CRNAs are the primary independent providers of anesthesia care. AA's in contrast, can only practice in conjunction with an anesthesiologist directly supervising them, which greatly limits their utilization. As such, AA's are not a functional solution in helping solve considerations of inadequate access to anesthesia care in rural and underserved communities, while their clinical inflexibility prevents them from caring for patients in need of anesthesia intervention in off-site locations within our tertiary care medical centers.

- Anesthesiologists report difficulty with supervision of AA's. The Society of Anesthesiologist reports that even appropriate ratios of anesthesiologists to AA's would result in lapses of supervision during critical portions of anesthetic cases. In a review of 1year data from a tertiary care hospital, lapses occurred commonly during first-case starts even with a 1:2 supervisory ratio.

- To date there are no peer-reviewed studies in scientific journals relating to the quality of care or anesthesia outcomes on behalf of AA's. AA's are explicitly recognized in only 17 states and the District of Columbia while 2 states have forced anesthesiology assistants to be dually boarded as a physician assistant and an anesthesiology assistant in order to practice in their respective states. Louisiana passed legislation that has effectively prohibited AA practice, declaring, "CRNAs receive a much higher level of education and training than do AA's."

- HB 2295 encourages a monopolistic market place whereby more cost efficient providers (CRNA's) would be significantly disadvantaged and in jeopardy of being replaced by lesser skilled providers who legally are unable to practice independently.

Finally, Many US states have turned away from Anesthesia Assistants by virtue of their lack of health care experience, abbreviated training, limited scope of practice, increased cost, and an inability to improve patient access across service lines and geographic regions. For the aforementioned reasons this iteration of provider is not a viable option for our nations future anesthesia needs; but rather an ASA initiative driven by a desire to control, and an intent to supplant over a century of vetted high quality care rendered by CRNA's. A valuable anesthesia resource that is neither in short supply nor lacking in willingness to serve our communities in a cost conscious fashion. In fact our collaborative care team model (CRNA/MD Anesthesiologist) can be delivered to this market place at 65% of the cost of MD anesthesia only practices while substantially improving access, efficiency and customer service across all communities and service lines.

In closing I would like to reiterate that as a board certified anesthesiologist I have worked collaboratively with my CRNA colleagues for over17 years under some of the most demanding circumstances the industry has to offer. Our team approach to complex clinical scenarios has continued to exceed the expectations of our patients while yielding quality

outcomes that are undisputed in the literature. I implore you to thoroughly consider the impact this potential legislation will have on the practice of our CRNA colleagues who have expertly provided high quality, cost-effective anesthesia care to our state for more than 100 years. Please carefully consider the impact of this bill on the cost, access, and quality of healthcare in our state.

Best Regards,

Shawn M. DeRemer M.D.
Executive Medical Director
Anesthesia Associates Northwest, LLC

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

As a practicing Chief CRNA at Providence Health System, within the Portland Service Area, I am writing this letter **in opposition of HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon. One of the arguments for HB 2295 states that there is a shortage of anesthesia providers in Oregon, and I would like to assure you that this is not the case. Our organization receives multiple CV's from CRNAs on a weekly basis, and this does not include the number of CV's we receive from recent graduates from OHSU's Nurse Anesthesia Program. Many of these recent nurse anesthesia graduates find difficulty in securing employment, and many find themselves relocating outside of Oregon.

I am also very concerned with how the impact of HB 2295 would have on the physical safety and emotional well-being for Oregon residents. The collaborative Anesthesiologist/CRNA model currently employed in Oregon provides a safe, accessible, and cost-effective model of care. This legislation will **put the lives of Oregonians at risk by replacing much more highly qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are unable to operate independently in the fast-paced environment of the operating room**. The proven track record of our established model of care makes the patient experience safer, more accessible and less expensive than the dangerous proposal outlined in HB 2295.

The differences I would like to highlight between CRNAs and AAs are:

1. CRNAs are educated and trained to work with or without anesthesiologist supervision, while the AAs must work under close supervision of anesthesiologists. The AAs practice is very restricted, and they mainly practice in urban areas and hospitals—where anesthesiologists primarily practice at, while CRNAS have a significant amount of autonomy and work in all types of practice settings. Since CRNAs are trained to operate independently; more than 80% of Oregon's rural communities are served by them. Having AAs in Oregon will limit patient access to care in rural areas. AA practice requires two providers for each patient, and would not be a cost effective solution to the rising cost of health care in Oregon.

2. CRNAs are advanced practice nurses, who have had extensive training and experience in critical care settings; taking care of the sickest patients in the hospital.

CRNAs receive a minimum of 7 years of formal education and preparation, and applicants into the nurse anesthesia program typically are required to have at least 6,000 hours of clinical patient care experience, before they are even considered for entry into the program. AAs on the other hand do not need any prior health care experience. The American Academy of Anesthesiologist Assistants even states that, "a clinical background is *not* an absolute requirement" for entry into an AA program. Also, entry to the AA program requires **any** baccalaureate degree, and this could vary from biology, chemistry, physics, computer science, and engineering—none of which may or may not apply to a particular health care profession.

3. AAs are only authorized to practice in 15 states, while CRNAs are practicing in every U.S. state. Something also has to be said when AAs are not authorized to work as anesthesia providers, for Veteran Affairs or the armed forces. Currently, CRNAs are the predominant anesthesia providers for these institutions. CRNAs have been around for over 150 years (with 44,000 plus CRNAs currently practicing) and AAs have only been around for only 40 years (with 700-1000 AAs currently practicing). There are also no credible research studies on anesthesia safety involving AAs, while there are numerous studies on the quality of care for CRNAs.

Establishing new AA regulations and creation of enforcement procedures in Oregon **would take substantial amount of time *and* money**, which Oregon does not have. Again, please don't put Oregonians at risk by changing something that works so well. **Please vote no on HB 2295.**

Respectfully,

Marilyn Hashimoto, DNAP, MBA, CRNA
PHS/AANW- Regional OB Anesthesia
Chief Anesthetist

OREGON HEALTH & SCIENCE UNIVERSITY

Testimony in Opposition to HB 2295

Before the House Committee on Health Care

Mary Karlet, CRNA, PhD
Program Director, OHSU Nurse Anesthesia Program

February 25, 2015

Chair Greenlick and members of the Committee:

For the record, my name is Dr. Mary Karlet. I am a certified registered nurse anesthetist (CRNA) and program director of the nurse anesthesia program at OHSU. Thank you for the opportunity to appear before the Committee and share my concerns in opposition to HB 2295. HB 2295 would recognize a new type of anesthesia provider called an anesthesiologist assistant, or AA. Currently anesthesia care is provided in Oregon by either Certified Registered Nurse Anesthetists (CRNA) or anesthesiologists.

I have been a practicing CRNA for over 25 years and am a long-time nurse anesthesia educator. I have also served as a consultant helping to develop nurse anesthesia programs throughout the country and have been a senior site reviewer for the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) since 1995. As you can see, my nurse anesthesia educational roots run deep.

As the director of our state's nurse anesthesia program at OHSU, I would like to highlight three points today about CRNA education: 1) CRNA applicant criteria, 2) Nurse anesthesia educational process and 3) Where OHSU CRNA graduates work in Oregon.

1. CRNA Applicant Criteria

Our application process is very competitive. For admission to the program, the COA standards require: four years of professional nursing education; a baccalaureate degree; RN licensure; and at least one year of critical care experience as a professional RN. Time spent as an RN is critical for applicants to develop skills as an independent decision maker and the capability of interpreting advanced monitoring based on knowledge of patient physiological and pharmacological principles.

At OHSU, most applicants have more than two years of critical care experience as an RN, making our students significantly experienced in working with critically ill patients and developing critical care thinking skills. Again, that is just for entry into the nurse anesthesia program.

In contrast, Anesthesiologist Assistants can enter their training programs with NO requirement for patient care experience.

2. Nurse Anesthesia Educational Process

Once admitted, the nurse anesthesia student spends 24 to 36 months in a full-time program of study that includes both didactic and clinical education. Our graduate program at OHSU awards a Master's degree from the School of Nursing with intense didactic and clinical education.

The nurse anesthesia clinical curriculum provides students with opportunities for experiences in the perioperative process that are unrestricted and that promote their development as competent safe nurse anesthetists. At OHSU, students rotate to large community hospitals in Portland, but also to small critical access hospitals in rural Oregon, such as Good Shepherd Hospital in Hermiston and Curry General Hospital in Gold Beach.

The clinical curriculum prepares the student for the full scope of current practice in a variety of work settings, including performing general and regional anesthesia to adult, pediatric, obstetric and cardiac patients. On average, OHSU students graduate with 900 cases.

Nurse anesthetists thus enter their programs having a strong foundation delivering quality patient care, and nurse anesthetists complete their programs with critical care thinking skills that make them capable of high-level independent judgment and function, which is critical to meeting the array of patient needs encountered in our complex care settings.

3) Where OHSU CRNA Graduates Work

Since inception in 2006, the program has had 80 graduates. Over 50% of OHSU's graduates stay and practice in Oregon. Because of the extensive clinical education in rural and metropolitan hospitals, OHSU graduates are prepared to work in any setting in Oregon. This means they can work in a team setting with an anesthesiologist, but they are equally prepared to work safely as sole anesthesia providers in hospitals, clinics and out-patient facilities. OHSU graduates are working in Portland, but they are also providing anesthesia care to patients in Silverton, Hood River, Hermiston, Newport, Newberg, and other rural areas of our state. Anesthesiologist Assistants cannot practice autonomously, making them unable to serve rural Oregon like CRNAs.

I would like to finally add, that this past summer, the Oregon Anesthesiology Group (OAG) approached our nurse anesthesia program, requesting that we invite our graduates to apply for newly adopted CRNA positions in their group. I am hopeful, that OAG pursues this path, so that they can work with the safe and time-tested anesthesia providers that are being trained here in our state. CRNAs provide excellent care here in Oregon, and along with our anesthesiologist colleagues, we are meeting the anesthesia needs of the citizens of Oregon.

Thank you again for the opportunity to talk with you regarding my concerns, as an educator, about HB 2295. I am nearing retirement and will soon be passing the baton to a new generation of nurse anesthesia leaders. As I do so, I would like to know that here in Oregon, patients will continue to receive excellent anesthesia care from highly trained CRNAs and anesthesiologists.

I respectfully encourage your opposition to HB 2295. Thank you for your time, I'm happy to answer any questions you might have.

Outpatient
ANESTHESIA SERVICES

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

As the owner of Outpatient Anesthesia Services of Oregon, I am writing this letter **in opposition of HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

This legislation will **put the lives of Oregonians at risk by replacing much more highly qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are unable to operate independently in the fast-paced environment of the operating room**. The proven track record of our established model of care makes the patient environment safer, more accessible and less expensive than the dangerous proposal outlined in HB 2295. As a company that specializes in the outpatient setting, an AA model is simply unrealistic in balancing patient safety and cost-savings.

Because CRNAs are trained to operate independently, more than 80% of Oregon's rural communities are served by them. HB 2295 will limit access to that medical care.

My patients' physical safety and emotional well-being are critical to their health-care outcomes. I can not trust an "assistant" watching over them during critical moments of surgery. In the these fast-paced environments, there are many times when an Anesthesiologist is not immediately available to direct their work or intervene in an emergency, when time and training are definitive in patient outcomes.

The collaborative Anesthesiologist/CRNA model currently employed in Oregon provides a safe, accessible, and cost-effective model of care. Please don't put Oregonians at risk by changing something that works so well. **Please vote no on HB 2295.**

Very Respectfully,

Grant Diggles, CEO
Outpatient Anesthesia Services

503 655 3851 503 655 3318 contact@oasor.com
18765 SW Boones Ferry Rd. Suite 325 Tualatin, OR 97062
oasor.com After Hours Patient Hotline: 503-479-5535

February 25, 2015
Re: HB 2295 Anesthesiologist Assistants
Dear Chair Greenlick and Members of the Committee:

Innovative Anesthesia is one of leaders in staffing, hiring, and utilizing anesthesia providers in the Portland metropolitan area I wish to weigh in on HB 2295. Certified Registered Nurse Anesthetists are a critical part of our workforce. Respectfully, anesthesiologists and CRNAs show now difference in quality or safety. CRNAs work in all our facilities because of there safety record, there ability to work independently, and for the economic reasons; high value for economic price. I am writing today **in opposition to HB 2295**

HB 2295 proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon. As an group of anesthesia providers that cover 3 large, fast paced ambulatory care settings in Portland we know anesthesia complexity and believe that the model proposed here displays:

- No Increased access to care
- Limited utilization
- No proven outcome data
- Costly model of care

Supporters of HB 2295 claim there is a work force shortage for anesthesia providers. Currently, there is no evidence of work force supply issues from our perspectives. We have been able to fill any vacancy quickly and have a large pool of qualified CRNAs that live in Oregon who meet any fluctuations in demand readily, easily, and safely.

CRNAs are able to work independently and in anesthesia care models. Anesthesiologist Assistants would be required to work under the supervision of an Anesthesiologist. With an AA model, two healthcare providers must be utilized to provide anesthesia care to a single patient.

Please vote no on HB 2295.

Dan Vasend MS, CRNA

Innovative Anesthesia Inc.

Chief CRNA, Northwest Operations

House Health Care Committee
RE:HB 2295
February 25, 2015

Dear Chair Greenlick and Members of the Committee:

As one of nine Certified Registered Nurse Anesthetists practicing in the **Portland VA Medical Center**, and on behalf of whom I have been given permission to speak, I am writing today **in opposition to HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

I have been a CRNA for 37 years and have served in this VA Hospital the last fifteen. The topic of Anesthesiologist Assistants has never come up in departmental meetings of which I am aware and I rarely miss a meeting. The **Portland VAMC has the second busiest surgical service in the nation** and the expectations are for excellence, efficiency, teamwork and compassion for our Veteran population, no different from hospitals of every size and description. However, the veteran population is unique whether due to sequelae of military service or a lifetime of personal choices, rendering these individuals at higher risk for surgical and anesthesia morbidity and mortality.

Our practice model is the ACT (Anesthesia Care Team) which is applied in variable intensities depending upon patients' health status, acute condition, surgical procedure planned, experience level of the MD Anesthesiologist and CRNA, to name but a few parameters. However, the surgical schedule is busy and the vast majority of patients are significantly compromised, either because of surgical indications or because of pre-existing conditions. Therefore the CRNA is expected to manage the anesthetic after induction of anesthesia, for which the MDA is present. The MDA, who will provide medical consultation/coverage for more than one operating room (per definition of the ACT) returns to the operating room only when needed.

Currently, my understanding is that AAs are not credentialed to work independently. Having a team member who would be limited in scope, independence, or practice level, suggests that the MDA would be expected to stay in the room, covering just ONE patient's care rather than acting as team leader, facilitating more surgical patients' care. Such practice would cripple our progress at bringing an increasing number of veteran patients to the operating room at a time when the entire nation expects just the opposite.

Another element of my job is to participate in the recruitment process for new CRNA staff. Spring, 2014, over twenty highly qualified individuals from this community, the state, and the nation applied for two CRNA staff positions. Currently in the hiring process once again, we have twenty four applicants for one CRNA staff position. These are well-trained, highly-qualified candidates with impressive experience. Here in our institution, we see no threat to staffing potential whatsoever.

I would welcome the opportunity to answer questions or clarify any of my statements.

Please vote no on HB 2295.

Respectfully,

Rita F. Silen, CRNA

ritasilen@yahoo.com

February 23, 2015

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301
Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

I have worked side by side with anesthesiologists, CRNAs, and student nurse anesthetists throughout my career. In my residency program at the Naval Medical Center, San Diego, we (Anesthesiology residents and student nurse anesthetists), trained together, took hospital call together, and learned from each other. After training, I spent 3 years at a Naval Hospital, providing anesthesia care to our active duty and retired military, working side by side with independent practice CRNAs, and again, supporting each other and sharing the deployments. I have been privileged to work with the best CRNAs in both the military, and now, in civilian practice. I know their training and their dedication to safe provision of anesthesia care, whether working independently, or in a supervised model. Given my experience, I fully trust both anesthesia training programs to graduate well-educated, diligent, safe anesthesia providers capable of making sound clinical decisions in demanding circumstances. Before anesthesia providers become licensed, they spend years under the guidance of board certified MD and CRNAs. Having been in the position of overseeing the development of anesthesia trainees while working at Oregon Health and Sciences University, I know the inherent challenges and potential dangers. Even these highly educated and qualified trainees demand close attention and scrutiny throughout their years of clinical training.

Recognizing these difficulties, current federal standards require an Anesthesiologist supervise no more than two trainees at any given time. In fact, those same standards dictate anesthesiologists cannot supervise more than two operating rooms if even one of those rooms contains an anesthesia trainee. I do not see how it is possible to safely oversee 4 Anesthesia Assistants (AAs) at one time. Doing so would set a new, lower anesthesia safety standard contrary to current standard of care and federal stipulations. In fact, an American Society of Anesthesiology review of one year of data from a tertiary care hospital reveals Anesthesiologist oversight of AAs resulted in lapses of supervision during critical portions of anesthetic cases even with a 1:2 supervision ratio.

Introduction of AAs into Oregon will increase medical risk to our patients in this state. I do not believe anesthesia assistant training programs sufficiently qualify new graduates to provide safe anesthesia care. AA program graduates possess only 2 years of health sciences-related didactics and no direct patient clinical experience. In comparison,

a year one anesthesia resident (i.e., an anesthesia trainee being supervised by an Anesthesiologist) will have completed 4 years in Medical School and one year as an Intern, including 3 years of direct patient care before anesthetizing their very first patient. Likewise, CRNA's will have spent 4 years in a Bachelor of Nursing program and will have a minimum of 3 years directly caring for high acuity patients (e.g., ER, ICU) prior to their first day providing anesthesia as a trainee. Therefore, our current MD and CRNA anesthesia training programs, which have well-established safety records, require roughly twice as much education and clinical experience as do Anesthesia Assistant program before they are allowed to anesthetize their first patient even under the direct supervision of a board certified Anesthesiologist. This essentially sets a new, lesser training standard which has no evidence supporting such a change. If we are to deviate from current practices, which have hard evidence for patient safety under the care of Anesthesiologists and CRNAs, practicing independently, or Anesthesia residents and student Nurse Anesthetists, under the direct supervision of an Anesthesiologist, then it becomes absolutely necessary to prove the safety of such deviations. To date, AAs have no proven outcome data to support their practice as there are no peer-reviewed studies in scientific journals demonstrating AA safety or quality of care.

I feel strongly that HB 2295 represents a decrement in the standard of education and proficiency for anesthesia providers, and lowers the quality of care that patients will receive from a clinical anesthesia perspective. I implore you to carefully consider the impact this legislation will have on the care your constituents can expect to receive when they are in need of anesthesia services.

Best regards,

Lorinda Wahto, M.D.
Anesthesiologist
Providence St. Vincent Medical Center
9205 SW Barnes Rd
Portland, OR 97225

Testimony of Opposition to HB 2295

Before the House Committee on Health Care

William Clinton Whitacre
CRNA, DNAP

25 February 2015

Chairman Greenlick, Vice Chairs Hayden and Nosse, members of the committee:

My name is. William C. Whitacre, and I want to thank you for the opportunity to testify in opposition to HB 2295.

I am a board certified registered nurse anesthetist – otherwise know as a CRNA – which is a high-level provider of anesthesia – educated, trained and licensed to operate independently. I have more than a decade of independent experience in both military and civilian practice. I am here today to speak specifically to the issue of access, and how the proposal before the committee puts patient safety at risk.

In Oregon, Anesthesiologist and CRNAs meet the needs of our healthcare recipients. In our rural communities, more than 80% of the anesthesia is administered safely by independently operating CRNAs. In the metropolitan areas, such as Portland, anesthesia care team (ACT) models are highly utilized in many of the large hospital systems.

I am a U. S. Army Combat Veteran, who has served in Afghanistan and Iraq as the sole anesthesia provider on Forward Deployed Surgical Teams. I functioned as a collaborative, but independent member of an ACT. Much like civilian rural hospitals and clinics here in Oregon, military CRNAs operate independently to provide anesthesia without the supervision of an anesthesiologist. Because of this need for independent providers, the U. S. Army does not use Anesthesiologist Assistants.

Patient reactions to anesthesia can be unpredictable and require immediate problem solving and intervention. When something goes wrong, there's little time to press a button for a supervisor.

I'll give you an extreme example:

> I have experienced delivery of anesthesia in a tent environment, no running water, a coke can with two rubber hoses for an anesthesia machine, a diverse patient population of local nationals ages from the cradle to the grave, and our most valuable resource The United States Service Members!

Although Rural Oregon is certainly not that primitive, there are differences in the safety net offered by Portland's largest hospitals when compared to rural hospitals

and clinics. The ability to adapt in an emergency with limited resources or backup can mean the difference between life and death when seconds count.

I have worked in the only U.S. Level I Trauma center outside the continental United States, during which, I personally administered anesthesia for 3 of the surviving quadruple amputees, who lost their limbs in combat. This was done with a proven system, such as Oregonian has come to love and embrace. That model is the Anesthesia Care Team model of Anesthesiologist and CRNAs working collaboratively, but independently.

There are no supervised assistants on the front lines. And there are no supervised assistants administering anesthesia in remote areas of our state – and it needs to stay that way. Anesthesia administered by a provider qualified to operate independently is in a patient's best interest, and in the interest of public health.

Thank you for your time and consideration of my testimony.

Very Respectfully,

William Clinton Whitacre
CRNA, DNAP
12433 SE Scherrer St.
Happy Valley, OR 97086

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

As a practicing Medical Doctor at Mt. Scott Surgical Center, I am writing this letter **in opposition of HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

This legislation will **put the lives of Oregonians at risk by replacing much more highly qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are unable to operate independently in the fast-paced environment of the operating room.** The proven track record of our established model of care makes the patient experience safer, more accessible and less expensive than the dangerous proposal outlined in HB 2295.

Because CRNAs are trained to operate independently, more than 80% of Oregon's rural communities are served by them. HB 2295 will limit access to that medical care.

My patients' physical safety and emotional well-being are critical to their health-care outcomes. I can not trust an "assistant" watching over them during critical moments of surgery. There are many times when an Anesthesiologist is not immediately available to direct their work or intervene in an emergency.

The collaborative Anesthesiologist/CRNA model currently employed in Oregon provides a safe, accessible, and cost-effective model of care. Please don't put Oregonians at risk by changing something that works so well. **Please vote no on HB 2295.**

Very Respectfully,

Dominic Patillo
MD, Hand and Upper Extremity Fellow
10000 SE Main St.
Portland, Oregon 97216
1-(503)-256-5866

Dear Oregon Senators and Representatives,

I am an Oregon physician residing and practicing in this great state. I am writing this letter to urge you to oppose HB 2295, which is being introduced to license Anesthesiologist Assistants (AAs) in Oregon for the first time. This legislation is unnecessary as it will not increase patient access to anesthesia care, will not decrease healthcare costs and is very likely to increase risk for our Oregon health care beneficiaries.

First, there is no need for AAs. In addition to board certified Anesthesiologists, Oregon also has well-established Certified Registered Nurse Anesthetists (CRNAs), who are capable of independent provision of anesthesia care to our Oregon Patients and provide much needed anesthesia services to our rural communities. There are two programs at Oregon Health & Science University that train Anesthesiologist and CRNAs many of which graduate only to seek employment in other states, due to the lack of demand for anesthesia providers in Oregon. Thus, Oregon does not need AAs.

Secondly, Independent practice is a hallmark of Anesthesiologists and CRNAs. Thus, AAs are not capable of independent practice due to their limited scope of practice, which is only under the direct supervision of an Anesthesiologist. This negates the use of AAs in rural hospitals and health care facilities in which there are no Anesthesiologist, but staffed by CRNAs. There is no proof or supported documentation that they will increase access to care, especially in rural communities.

Finally, AAs require direct supervision, which will increase health care costs due to a redundancy of anesthesia providers. I also believe our patients, whose safety, physical and psychological well-being are the priority in my everyday practice, would not be comfortable with an "assistant" watching over them during crucial moments of surgery, when an anesthesiologist or CRNA is not immediately available to "direct" their practice of anesthesia.

In closing, I humbly request you to not support HB 2295. I would like to reiterate that the collaborative Anesthesiologist/CRNA model currently employed in Oregon has been undisputed in the literature concerning patient safety and yielding quality outcomes, without increasing the cost of healthcare in our state.

Very Respectfully,

Roger Wobig, MD
1111Northeast 99th #101
Portland OR 97220

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Very Respectfully,

2/13/15

Matthew Sugalski, MD
6542 Southeast Lake Road, Suite 201
Milwaukie, OR 97222
503-659-1769

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

As a practicing Medical Doctor in Oregon, I am writing this letter **in opposition to HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

This legislation will **put the lives of Oregonians at risk by replacing more qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are unable to operate independently in the fast-paced environment of the operating room.** The proven track record of our established model of care makes the patient experience safer, more accessible and less expensive than the illogical proposal outlined in HB 2295.

Because CRNAs are trained to operate independently, more than 80% of Oregon's rural communities are served by them. HB 2295 will limit access to that medical care.

My patients' physical safety and emotional well-being are critical to their health-care outcomes. I can not trust an "assistant" watching over them during critical moments of a procedure. There are many times when an anesthesiologist is not immediately available to direct their work or intervene in an emergency.

The collaborative anesthesiologist/CRNA model currently employed in Oregon provides a safe, accessible, and cost-effective model of care. Please do not reduce the standard of anesthesia care in Oregon by changing something that has worked so well for over 100 years. **Please vote no on HB 2295.**

Very Respectfully,

John Ragsdale, MD
General Surgeon
10330 SE 32nd Ave Suite340
Milwaukie, OR 97222

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

As a practicing Medical Doctor at, Providence Milwaukie Hospital, I am writing this letter **in opposition of HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

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Very Respectfully,

Name: Adrian Varela, M.D.
Title:
Address of Institution: 10330 SE 32nd Ave, #320
Milwaukie, OR 97222

Oregon House

Committee on Health Care

900 Court Street NE

Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

As a practicing Medical Doctor at (~~name of institution~~ PMH), I am writing this letter **in opposition of HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

This legislation will **put the lives of Oregonians at risk by replacing much more highly qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are unable to operate independently in the fast-paced environment of the operating room.** The proven track record of our established model of care makes the patient experience safer, more accessible and less expensive than the dangerous proposal outlined in HB 2295.

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Very Respectfully,

Amanda McClure MD

Amanda McClure, MD.

Insert signature block here

Name Amanda McClure, MD

Title Colon & Rectal Surgeon

Address or Institution

9155 SW Barnes Rd Suite 231

Portland, OR 97225

Oregon House

Committee on Health Care

900 Court Street NE

Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee:

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Very Respectfully,

Insert signature block here

Name Scott M. Browning

Title MD

Address or Institution
Providence Milwaukie Hospital
10150 SE 32nd Ave
Milwaukie, OR 97222
(503) 216-5380

Oregon House
Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Licensing of Anesthesiologist Assistants

Dear Chair Greenlick and Members of the Committee: 2/22/15

As a practicing Medical Doctor at the Providence Milwaukie Hospital, I am writing this letter **in opposition to HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon.

This legislation will **put the lives of Oregonians at risk by replacing more qualified Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologists, with AAs, who by their limited scope of practice are unable to operate independently in the fast-paced environment of the operating room**. The proven track record of our established model of care makes the patient experience safer, more accessible and less expensive than the illogical proposal outlined in HB 2295.

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Very Respectfully,

Dr. Bret Kean, MD
Orthopedic Surgeon
Providence Milwaukie Hospital
10150 SE 32nd Ave.
Milwaukie, OR 97222

Testimony in Opposition to HB 2295

Before the House Committee on Health Care

Duane Laurelton CRNA, MAE
Director of Anesthesia Services
Providence Hood River Memorial Hospital

February 25, 2015

Chair Greenlick and members of the Committee:

My name is Duane Laurelton; I am a Certified Registered Nurse Anesthetist (CRNA) and the Director of Anesthesia Services at Providence Hood River Memorial Hospital (PHRMH). PHRMH is a Critical Access Hospital (CAH). I have been on the Medical staff of PHRMH since 1988. I have been a practicing CRNA for 30 years. Thank you for the opportunity to present written testimony to the Committee and share my concerns in opposition to HB 2295.

There are two reasons why I am opposed to this bill: 1) AA's do not increase access to care and they have a limited scope of practice. 2) They create a negative economic impact.

1. No increase to Access of Care

CRNAs provide anesthesia care throughout Oregon in both rural and urban settings. CRNAs practice in every setting, including hospital surgical suites and obstetrical delivery rooms, critical access hospitals, ambulatory surgical centers; the offices of dentists, podiatrists, ophthalmologists, plastic surgeons and other medical professionals, and U.S. Military and Veterans Administration healthcare facilities. In contrast, AAs offer:

• **LIMITED UTILIZATION:** Because AAs cannot practice without anesthesiologist supervision, AAs could not practice in Hood River or in any rural Hospital setting where CRNAs working without anesthesiologist involvement are the primary providers of anesthesia care. AAs are not trained to provide spinal, epidural anesthesia care. The AA model's focus, i.e. on only practicing where anesthesiologists practice, greatly limits their utilization. Thus, AAs cannot help solve problems of inadequate access to anesthesia care in rural and underserved communities.

• **NO PROVEN OUTCOME DATA:** There are no peer-reviewed studies published in scientific journals regarding the quality of care of AA practice or AA anesthesia outcomes. AAs are explicitly recognized in state laws or regulations in only 13 states and the District of Columbia. Louisiana actually passed legislation that has the effect of prohibiting AA practice, declaring that "CRNAs receive a much higher level of education and training than do AAs."

2. Negative Economic Impact

Independent studies have shown that CRNAs acting as the sole anesthesia provider is the most cost-effective model for anesthesia delivery. This model is used here in Hood River and in rural communities throughout Oregon. In contrast, AAs offer:

• **COSTLY MODEL OF CARE:** With an AA model, two healthcare providers (a supervising anesthesiologist and an AA) must be utilized to provide anesthesia care to one patient.

Thank you for your consideration.

Respectfully,

Duane Laurelton CRNA, MAE

Director of Anesthesia Services

Providence Hood River Memorial Hospital

Hood River, Oregon

February 20, 2015

Oregon House, Committee on Health Care
900 Court Street NE
Salem, OR 97301

Re: Oregon House Bill (HB) 2295: Use of Anesthesiologist Assistants in Oregon

Dear Chair Greenlick and Members of the Committee:

As a Chief Nurse Anesthetist at Silverton Hospital , I am writing today **in opposition to HB 2295**, which proposes licensure for "Anesthesiologist Assistants (AAs)" in Oregon. I have been a CRNA for 10 years and I have served in this administrative capacity for the past 2 years. Our department provides the far spectrum of anesthesia care from day surgery to inpatient care, from laboring mothers to emergency surgery, and in endoscopy suites and remote areas within the hospital such as CT scan or MRI.

The other part of my job includes recruitment of CRNAs to join our practice. Traditionally we have many more applicants than we have jobs for. OHSU has an educational program for CRNAs which we are directly involved with and provides us with a great resource for recruitment of highly qualified CRNAs. The graduates from this program easily fit into our anesthesia team and provide excellent anesthesia care.

Currently, there are no issues in the anesthesia workforce that I am aware of in Oregon. We are very proud of our team and our ability to easily recruit CRNAs from across the country and retain a highly functioning anesthesia department.

Please vote no on HB 2295.

Respectfully,

Todd Meyer, CRNA