
AP[®] Seminar Performance Task 1

Sample Student Responses and Scoring Commentary

Inside:

Individual Research Report

- ☒ **Scoring Guidelines**
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Individual Research Report (IRR)**30 points****General Scoring Notes**

- When applying the rubric for each individual row, you should award the score for that row based solely upon the criteria indicated for that row, according to the preponderance of evidence.
- Read the whole report before assigning a score for any row.
- Reward the student for skills they have demonstrated. Demonstrating means that there is evidence that you can point to in the report.

0 (Zero) Scores

- A score of 0 is assigned to a single row of the rubric when the response displays a below-minimum level of quality as identified in that row of the rubric. For rows 1 to 4, if there is no evidence of any research (i.e., it is all opinion and there is nothing in the bibliography, no citation or attributed phrases in the response) then a score of 0 should be assigned.
- Scores of 0 are assigned to all rows of the rubric when the response is off-topic; a repetition of a prompt; entirely crossed-out; a drawing or other markings; a presentation (or other off-task format); or a response in a language other than English.

NR (No Response)

A score of NR is assigned to responses that are blank.

Reporting Category	Scoring Criteria			
Row 1 Understand and Analyze Context (0, 2, 4 or 6 points)	0 points Does not meet the criteria for two points.	2 points The report identifies an overly broad or simplistic area of investigation and/or shows little evidence of research. A simplistic connection or no connection is made to the overall problem or issue.	4 points The report identifies an adequately focused area of investigation in the research and shows some variety in source selection. It makes some reference to the overall problem or issue.	6 points The report situates the student’s investigation of the complexities of a problem or issue in research that draws upon a wide variety of appropriate sources. It makes clear the significance to a larger context.
Decision Rules and Scoring Notes				
	Typical responses that earn 0 points: <ul style="list-style-type: none"> Provide no evidence of research (i.e., there is a complete absence of bibliography, internal citations, and attributive tags that point to research. If one of these is present, cannot score 0). 	Typical responses that earn 2 points: <ul style="list-style-type: none"> Address a very general topic of investigation (e.g. “pollution”) Draw mainly from one or two sources or poor-quality sources. Provide an overly simplistic, illogical, or exaggerated rationale for the investigation (or does not provide a rationale at all). 	Typical responses that earn 4 points: <ul style="list-style-type: none"> Identify too many aspects of the topic to address complexity (e.g. “air, water, and land pollution”). May be overly reliant on research sources not appropriate for an academic task on this topic. May provide a rationale about the significance of the investigation that lacks details necessary to address complexity. 	Typical responses that earn 6 points: <ul style="list-style-type: none"> Clearly state an area of investigation that is narrow enough to address the complexity of the problem or issue (e.g. “water pollution in India”). The context established is sustained throughout. Predominantly include research sources appropriate for an academic task on this topic. Provide specific and relevant details to convey why the problem or issue matters/is important.
Additional Notes: <ul style="list-style-type: none"> The research context is located often in the titles of the reports and first paragraphs, but the whole report needs to sustain the focus throughout. Review Bibliography or Works Cited (but also check that context is established by sources actually used, especially academic sources). 				

Reporting Category	Scoring Criteria			
Row 2 Understand and Analyze Argument (0, 2, 4 or 6 points)	0 points Does not meet the criteria for two points.	2 points The report restates or misstates information from sources. It doesn't address reasoning in the sources or it does so in a very simplistic way.	4 points The report summarizes information and in places offers effective explanation of the reasoning within the sources' argument (but does so inconsistently).	6 points The report demonstrates an understanding of the reasoning and validity of the sources' arguments.* This can be evidenced by direct explanation or through purposeful use of the reasoning and conclusions.
	Decision Rules and Scoring Notes			
	Typical responses that earn 0 points: <ul style="list-style-type: none"> Provide no evidence of research (i.e., there is a complete absence of bibliography, internal citations, and attributive tags that point to research. If one of these is present, cannot score 0). 	Typical responses that earn 2 points: <ul style="list-style-type: none"> Make no distinction between paraphrased material and response's commentary. Demonstrate no instances of effective explanation. (For example, commentary is limited to restatement of quotes, is simplistic or overgeneralized, or shows misunderstanding of the source.) Do not anchor ideas to sources (or does so generally, "research shows" or "some studies"). 	Typical responses that earn 4 points: <ul style="list-style-type: none"> Are dominated by summary of source material rather than explanation of sources' arguments. Provide some instances of effective explanation of authors' reasoning. Occasionally lack clarity about what is commentary and what is from the source material. 	Typical responses that earn 6 points: <ul style="list-style-type: none"> Provide commentary that explains authors' reasoning, claims or conclusions (direct explanation). Make effective use of authors' reasoning, claims or conclusions (showing understanding of the sources) (purposeful use). Attribute clearly source material (i.e., readers always able to tell what comes from what source)
	Additional Notes: <ul style="list-style-type: none"> * Validity is defined as "the extent to which an argument or claim is logical." Reference to arguments from the sources used often appears at the end of paragraphs and / or immediately following an in-text citation as part of the commentary on a source. Clear attribution, (i.e. readers are always able to tell what comes from what source and what kind of source it is) must be present in order for the report to demonstrate "purposeful use." 			

Reporting Category	Scoring Criteria			
Row 3 Evaluate Sources and Evidence (0, 2, 4 or 6 points)	0 points Does not meet the criteria for two points.	2 points The report identifies evidence from chosen sources. It makes very simplistic, illogical, or no reference to the credibility of sources and evidence, and their relevance to the inquiry.	4 points The report in places offers some effective explanation of the chosen sources and evidence in terms of their credibility and relevance to the inquiry (but does so inconsistently).	6 points The report demonstrates evaluation of credibility of the sources and selection of relevant evidence from the sources. Both can be evidenced by direct explanation or through purposeful use.
	Decision Rules and Scoring Notes			
	Typical responses that earn 0 points: <ul style="list-style-type: none"> Provide no evidence of research (i.e., there is a complete absence of bibliography, internal citations, and attributive tags that point to research. If one of these is present, cannot score 0). 	Typical responses that earn 2 points: <ul style="list-style-type: none"> Provide evidence that is poorly selected in terms of relevance and credibility (e.g., evidence that is irrelevant or only obliquely relevant). Provide evidence without addressing relevance and credibility. Demonstrate consistent lack of understanding of selected evidence. May include credible sources, but oversimplify or reduce them to generalities. 	Typical responses that earn 4 points: <ul style="list-style-type: none"> Contain attributions or explanations for non-academic sources that do not successfully establish credibility (e.g., “John Doe, a journalist, explains...”). Pay attention to the evidence, but not the source (may treat all evidence as equal when it is not). At times may demonstrate lack of understanding of selected evidence and/or its relevance. Draw upon outdated research without providing a rationale for using that older evidence. 	Typical responses that earn 6 points: <ul style="list-style-type: none"> Provide descriptions in the attributions that effectively establish credibility of the source and relevance of evidence (direct explanation). Make effective use of well-chosen, relevant evidence from credible academic sources (purposeful use).
Additional Notes: <ul style="list-style-type: none"> In Row 1, the judgement is whether the bibliography allows for complex context; Row 3 judges whether the incremental examples of evidence presented are well-selected and well-used. Purposeful use, in this case, refers to the deployment of relevant evidence from a credible source. Clear attribution, (i.e. readers are always able to tell what comes from what source and what kind of source it is) must be present in order for the report to demonstrate “purposeful use.” 				

Reporting Category	Scoring Criteria			
Row 4 Understand and Analyze Perspective	0 points Does not meet the criteria for two points.	2 points The report identifies few and/or oversimplified perspectives from sources.**	4 points The report identifies multiple perspectives from sources, making some general connections among those perspectives.**	6 points The report discusses a range of perspectives and draws explicit and relevant connections among those perspectives.**
(0, 2, 4, or 6 points)	Decision Rules and Scoring Notes			
	Typical responses that earn 0 points: <ul style="list-style-type: none"> Provide no evidence of research (i.e., there is a complete absence of bibliography, internal citations, and attributive tags that point to research. If one of these is present, cannot score 0). 	Typical responses that earn 2 points: <ul style="list-style-type: none"> May include oversimplified or vaguely attributed perspectives (it is unclear whether or not they are from sources). May identify information from sources (facts or topics or general stakeholder point of view) but not points of view as conveyed through arguments. Juxtapose perspectives but connections are not clear (they are isolated from each other). 	Typical responses that earn 4 points: <ul style="list-style-type: none"> Include multiple perspectives and some instances of general connections. Repeat perspectives or connections rather than developing a nuanced, detailed discussion of how they relate. At times present perspectives that are clearly derived from specific sources, but may lapse into opinions or topics that are not clearly linked to specific sources. 	Typical responses that earn 6 points: <ul style="list-style-type: none"> Go beyond mere identification of multiple perspectives by using details from different sources' arguments to explain specific relationships or connections among perspectives (i.e., placing them in dialogue). <p>Scoring note: There must consistently be clear attribution or citation linking perspectives to sources to score high.</p>
	Additional Notes: <ul style="list-style-type: none"> **A perspective is a "point of view conveyed through an argument." (This means the source's argument). Facts, topics, and general stakeholder points of view (e.g., "teachers" or "students") are not perspectives. Throughout the report pay attention to organization of paragraphs (and possibly headings) as it's a common way to group perspectives. Readers should pay attention to transitions as effective transitions may signal connections among perspectives. 			

Reporting Category	Scoring Criteria			
Row 5 Apply Conventions (0–3 points)	0 points Does not meet the criteria for one point.	1 point The report includes many errors in attribution and citation OR the bibliography is inconsistent in style and format and/or incomplete.	2 points The report attributes or cites sources used but not always accurately. The bibliography references sources using a consistent style.	3 points The report attributes and accurately cites the sources used. The bibliography accurately references sources using a consistent style.
Decision Rules and Scoring Notes				
	Typical responses that earn 0 points: <ul style="list-style-type: none"> Provide no evidence of research (i.e., there is a complete absence of bibliography, internal citations, and attributive tags that point to research. If one of these is present, cannot score 0). 	Typical responses that earn 1 point (many errors): <ul style="list-style-type: none"> Include internal citations, but no bibliography (or vice versa). Demonstrate no organizational principle in bibliography/works cited (e.g., alphabetical or numerical). Provide little or no evidence of successful linking of in-text citations to bibliographic references (e.g., in-text references are to titles but bibliographic references are listed by author; titles are different in the text and in the works cited). Include poor or no attributive phrasing with paraphrased material (e.g., “Studies show...”; “Research says...” with no additional in-text citation). 	Typical responses that earn 2 points (some errors): <ul style="list-style-type: none"> Provide some uniformity in citation style. Provide, perhaps with a few lapses, an organizational principle in bibliography/works cited (e.g., alphabetical or numerical). Include unclear references or errors in citations, (e.g., citations with missing elements or essential elements that must be guessed from a url). Provide some successful linking of citations to bibliographic references. Provide some successful attributive phrasing for paraphrased material and/or in-text parenthetical citations. 	Typical responses that earn 3 points (few significant flaws): <ul style="list-style-type: none"> Contain few flaws. Provide clear organization principle in bibliography/works cited. Provide consistent evidence of linking internal citations to bibliographic references. Include consistent and clear attributive phrasing for paraphrased material and/or in-text parenthetical citations. <p>Scoring note: The response cannot score 3 points if essential elements of citations (i.e., author/organization, title, publication, date) are consistently missing.</p>
Additional Notes: <ul style="list-style-type: none"> In AP Seminar, there is no requirement for using a particular style sheet; however, responses must use a style that is consistent and complete. Check the bibliography for consistency in style (and if there are essential elements missing). Check for clarity/accuracy in internal citations. Check to make sure all internal citations match up to the bibliography. In order for links to work in print, there must be a clear organizational principle arranging the elements on the bib/works cited. 				

Reporting Category	Scoring Criteria			
Row 6 Apply Conventions (0–3 points)	0 points Does not meet the criteria for one point.	1 point The report contains many flaws in grammar that often interfere with communication to the reader. The written style is not appropriate for an academic audience.	2 points The report is generally clear but contains some flaws in grammar that occasionally interfere with communication to the reader. The written style is inconsistent and not always appropriate for an academic audience.	3 points The report communicates clearly to the reader (although may not be free of errors in grammar and style). The written style is consistently appropriate for an academic audience.
	Decision Rules and Scoring Notes			
	Typical responses that earn 0 points: <ul style="list-style-type: none"> Contain no sentences created by the student. (If there are any sentences created by the student, cannot score 0). 	Typical responses that earn 1 point: <ul style="list-style-type: none"> May contain many instances where sentences are not controlled. May rely almost exclusively on simplistic language (e.g., This is good. This is bad). Employ an overall style that is not appropriate for an academic report; or colloquial tone. Include many passages that are incoherent. Provide too few sentences to evaluate or the student's own words are indistinguishable from paraphrases of sources. 	Typical responses that earn 2 points: <ul style="list-style-type: none"> Contain some lapses in sentence control (e.g., run-ons, fragments, or mixed construction when integrating quoted material). Demonstrate imprecise or vague word choice insufficient to communicate complexity of ideas. Sometimes lapse into colloquial language. Use overly dense prose at the expense of coherence and clarity. 	Typical responses that earn 3 points: <ul style="list-style-type: none"> Contain few flaws which do not impede clarity for understanding of complex ideas. Demonstrate word choice sufficient to communicate complex ideas. Use clear prose.
	Additional Notes: <ul style="list-style-type: none"> Because this is a report, the prose is judged by its ability to clearly and precisely articulate complex research content. Readers should focus on the sentences written by the student, not those quoted or derived from sources. 			

Burnout among U.S. Orthopedic Surgeons

According to The Guardian, a left-wing newspaper, burnout rates among doctors have skyrocketed to around 50% in the wake of the pandemic, which carries serious implications about the future of medical care (Ahillan & Ungood-Thomas). Maïke van Niekerk (2023), orthopedic surgeon and activist, estimates burnout among surgeons to cost \$4.6 billion annually from lost productivity and high physician turnover attributed to being burned out. These losses impact individuals in the form of increased healthcare costs and decreased access to doctors. Orthopedic surgery in particular has some of the highest rates of burnout among surgeons (Chahal & Matwala, 2025). Professional burnout is defined as fatigue, depersonalization, and decreased sense of personal accomplishment accompanied by prolonged workplace stress (Dal Corso et al., 2019). This paper analyzes the state of burnout among orthopedic surgeons in the US through the systematic lens to identify organizational, social, and individual perspectives to reducing institutional burnout. Only after identifying causes to burnout can we mitigate its costly effects.

Hospitals and surgical institutions are at the frontlines of surgeon lives when it comes to burnout. In a study by the American College of Surgeons, 40% of surgeons surveyed attributed their burnout to work demands, reduced autonomy, and bureaucratic pressures (Ross et al., 2025). Surgeon workload consists of medical documentation with Electronic Health Records, constant communication with patient insurance agencies, navigation of billing details and malpractice lawsuits, adoption of evolving healthcare regulations, and frequent overnight call duties (Kassam, 2024). These organizational burdens prolong surgeon work hours with each additional hour per week correlated with 3% greater odds of burnout (Wes et al., 2019). Travis (2020), orthopedic surgeon and researcher, finds that 40% of surgeons working more than 80

hours a week are burned out, suggesting that an organizational directed approach related to work hours is needed to reduce burnout. Studies analyzed by the American Medical Association imposed duty hour regulations on surgeons aimed to decrease patient load and stress from overwork (DeChant et al., 2019). Some scholars like Dyrbye, co-director of Mayo Clinic's physician wellbeing program, found significant improvements to surgeon wellness in limiting work hours due to employer allocated support time and adequate time with family (West et al., 2016). In fact, only 36% of surgeons report their schedule having enough time for family, which demonstrates a need for change in surgeon schedules (Ross et al., 2025). However, Dr. Shanafelt, a researcher on professional wellbeing, discovered that duty hour restrictions exacerbated burnout symptoms by forcing surgeons to complete the same amount of work in less time (Wes et al., 2018). This may be because surgeons with high workload will often dedicate time at home to complete their administrative tasks, which produces work-life imbalance and work-home conflicts while hardly changing total hours worked per week. Therefore, a restriction in working hours may address some challenges that lead surgeons to burnout but not others.

Hospital medical staff also impact surgeon burnout through day to day interactions with surgeons. These social relationships within the workplace are factors that can cause frustration or streamline workflow to impact surgeon burnout symptoms. For example, interpersonal conflicts with coworkers, whether in the administration or the operating room, are negatively associated with work engagement, which diminishes personal fulfillment and increases odds of burnout (Dal Corso et al., 2019). In addition, a Stanford doctor found that a lower perceived quality of interpersonal teamwork among medical teams is associated with increased emotional exhaustion and higher standardized patient mortality ratios (Wes et al., 2018). On the other hand, a survey cited by the American Medical Association found that greater perceived capabilities of a patient

care team lowered exhaustion and cynicism expressed by the attending surgeon (DeChant et al., 2019). These studies demonstrate that teamwork among medical professionals is important to improving patient care and physician wellbeing, because it can affect surgeon mental states and decrease administrative workload. In fact, the Journal of Internal Medicine finds that inefficient work practices such as requiring physician entered medical documentation lead to 29% greater rates of burnout (Wes et al., 2018). Therefore, shifting responsibilities from surgeons to a dedicated team of scribes and clerics can diminish workload pressures and increase interpersonal support among coworkers to combat burnout. Mentorship is another avenue that takes advantage of social support benefits to surgeons. The Royal College of Surgeons of England cites lack of feedback from seniors and concern about performance as a recurring source of stress among surgeons (Chahal & Matwala, 2025). A dedicated mentorship program remedies this issue by connecting younger surgeons with their more experienced counterparts to provide greater guidance and confidence to surgeons during their careers (Lu et al., 2024). By modifying work relationships, medical staff can help alleviate burnout among orthopedic surgeons.

Orthopedic surgeons themselves hold some responsibility toward interpersonal conflicts and burnout. Among their personal stressors which include student debt, regret over career choices, and substance abuse, individual surgeons also neglect aspects of their physical wellbeing. A peer reviewed journal found that only 31% of practicing orthopedic surgeons in the US were compliant with the Center for Disease Control's aerobic and strength exercise recommendations (Chahal & Matwala, 2025). This means that over two thirds of orthopedic surgeons may be experiencing poor health and exhaustion, which contribute to burnout alongside their organizational workload. In addition to a lack of physical activity, surgeons are prone to poor sleeping patterns, which may be related to frequent on call duties during nights and

weekends (Mir et al., 2022). These health concerns are often left unaddressed since around 50% of physicians do not have a general personal physician, and those who do visit them less than the average US adult (Ross et al. 2025). The World Health organization suggests increasing stress management skills, physical activity, and mental health literacy training to improve surgeon wellbeing and alleviate burnout (Van Neikerk et al., 2023). These individual directed interventions are done through stress management seminars and mindfulness workshops which gather surgeons together to share experiences and teach coping strategies (Travis, 2020). As a result, physicians are provided the tools that they can use to regulate symptoms of burnout. However, a peer reviewed journal argues that physician focused burnout interventions unduly places the burden of responsibility onto individuals (Bower et al., 2017). This leads surgeons to blame themselves for being less resilient: a belief reinforced by cultural expectations of stoicism and grit among practitioners. Therefore, individual focused tactics may not be effective for all surgeons and can result in negative side effects. Still, strategies to encourage fitness activity, proper nutrition, and sleep hygiene are generally received well and significantly improve surgeon wellbeing (Ross et al., 2025).

This paper identifies systematic factors contributing to burnout in orthopedic surgeons in the US, which result in significant losses in productivity and quality of care throughout the country. Time spent by surgeons on work related tasks in the office or at home is dictated by their organization apportioned workload. How a physician's time at work is spent is affected by workplace social relations among medical staff who can add to or relieve their bureaucratic pressures. Individual surgeons may play an active role in improving those relationships and personal health habits to manage their stress and mitigate symptoms of burnout. As burnout rates

increase alongside medical costs, improving surgeon wellbeing becomes an ever greater priority to protect the health and safety of patients and surgeons alike.

Word Count: 1218

References

- Ahillan, T., & Ungood-Thomas, J. (2024, August 4). Trainee doctors in UK facing higher risk of burnout than during pandemic. *The Guardian*, <https://www.theguardian.com/society/article/2024/aug/04/trainee-doctors-uk-facing-higher-risk-burnout-than-during-pandemic>
- Bower, P., Panagioti, M., Panagopoulou, E., Liwith, G., Kontopantelis, E., Chew-Graham, C., ... Esmail, A. (2017). Controlled interventions to reduce burnout in physicians: A systematic review and meta-analysis. *JAMA Internal Medicine*, 177(2), 195-205. <http://dx.doi.org/10.1001/jamainternmed.2016.7674>
- Chahal, K., & Matwala, K. (2025). A systematic review of the prevalence of burnout in orthopedic surgeons. *The Annals of The Royal College of Surgeons of England*, 107(1), 61-67. <https://doi.org/10.1308/rcsann.2024.0009>
- Dal Corso, L., Carluccio, F., Scarcella, M., Bartolucci, G. B., Bizzotto, R., Vianello, L., ... & De Carlo, N. A. (2019). How to improve performance and prevent burnout in safety representatives. *Med Lav*. 110(2), 142-154. <https://doi.org/10.23749/mdl.v110i2.7224>
- DeChant, P. F., Acs, A., Rhee, K. B., Boulanger, T. D., Snowden, J. L., Tutty, M. A., ... & Craig, K. J. T. (2019). Effect of organization-directed workplace interventions on physician burnout: A systematic review. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, 3(4), 384-408. <https://doi.org/10.1016/j.mayocpiqo.2019.07.006>
- Kassam, H. F. (2024). Orthopedic advocacy: A starter's guide for optimizing physician engagement and public awareness. *Journal of Shoulder and Elbow Surgery*, 34I(1), 214-218. <https://doi.org/10.1016/j.jse.2024.07.044>.

- Lu, S., Mc Colgan, R., Nguyen, J., Kelly, B. T., & Fufa, D. T. (2024). Worsening burnout in orthopedic surgeons since 2019 and key areas of work life drivers. *HSS Journal*, 0(0), <https://doi.org/10.1177/15563316241242129>
- Mir, H., Downes, K., Chen, A. F., Grewal, R., Kelly, D. M., Lee, M. J., Leucht, P., & Dulai, S. K. (2021). Physician wellness in orthopedic surgery. *Bone & Joint Open* 2(11), 932-939. <https://doi.org/10.1302/2633-1462.211.BJO-2021-0153>
- Ross, P. P., Okafor, L. C., Rumps, M. V., & Mulcahey, M. K. (2025). Promoting wellness among orthopaedic surgeons. *JBJS Open Access*, 10(1). https://journals.lww.com/jbjsoa/fulltext/2025/03000/promoting_wellness_among_orthopaedic_surgeons.1.aspx?context=latestarticles
- Travis, V. (2020). Burnout in orthopedic surgeons. *Orthopaedics & Traumatology: Surgery & Research*, 106(1), 7-12. <https://doi.org/10.1016/j.otsr.2019.04.029>
- Van Niekerk, M., Tileston, K., Bouchard, M., Atanda, A., Goldstein, R., Gantsoudes, G., ,,, & Christino, M. A. (2023). System-level interventions for addressing burnout and improving professional wellness for orthopedic surgeons. *Journal of the Pediatric Orthopedic Society of North America*, 5(1), 620. <https://doi.org/10.55275/JPOSNA-2023-620>
- Wes, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2018). Physician burnout: Contributors, consequences and solutions. *Journal of Internal Medicine*, 283(6), 516-529. <https://doi.org/10.1111/joim.12752>
- West, C. P., Dyrbye, L. N., Erwin, P. J., & Shanafelt, T. D. (2016). Interventions to prevent and reduce physician burnout: A systematic review and meta-analysis. *The Lancet*, 388(10057), 2272-2281. [http://dx.doi.org/10.1016/S0140-6736\(16\)31279-X](http://dx.doi.org/10.1016/S0140-6736(16)31279-X)

Animal Testing: The Laws of Experimentation

Word Count: 1095

Animal Testing: The Laws of Experimentation

80 million tests are done on animals annually, but only 8% have been deemed successful (Animal Legal Defense Fund, 2022). Animal testing has been an issue, not always accurately predicting human symptoms. The American Anti-Vivisection Society (2024) claims that patients and physicians should be wary of products resulting from animal testing because it does not always replicate well in human clinical research. Animal testing is a global problem as they are being tested everywhere, and the risk to animals' health is not worth the harm inflicted on them. Even if animal testing does not guarantee success, it is still helpful in predicting effects on humans. A recent example has been the COVID-19 vaccines. Animals were used to test new vaccinations to remain within the legal and ethical guidelines set by governments. This begs the question; what is the best way to mitigate harmful testing done to animals while ensuring human safety? Many patterns found in legal acts, laws, and guidelines include the Animal Welfare Act, the use of the International Animal Care and Use Committee (IACUC), and the administration of drugs to the animal before the testing.

Created in 1966 to mitigate animal testing, the Animal Welfare Act (AWA) has many laws and rules on how to treat animals. It defines "laboratory animals" and gives circumstances where animals can be used. The Food and Agriculture Organization, a specialized agency in the United Nations, published a copy of the AWA from the United States Congress, including the basic provisions concerning animal management and treatment. The AWA states that animals should not go through unnecessary pain without an ethical cause (Food and Agriculture Organization, n.d). They argue that the AWA has a large impact on the treatment of animals in testing laboratories. The United States Department of Agriculture put out regulations that keep animals safe and ethically treated. (Foundation for Biomedical Research, n.d). By setting high

ethical standards for animals, animals receive equal treatment to humans. This was implemented to keep animals safe, unharmed, and ethically treated. Supervisors are needed to ensure ethical care. Andrew D. Cardon, a researcher at the National Association for Biomedical Research, wrote that the AWA has requirements for research facilities including registrations, IACUC, veterinary care, and annual reports (Cardon, 2012). However, Naoko Kagiya and Tatsuji Nomura, both researchers of animal testing in Japan, claim that animal regulations are regulated by law but the IACUC, registration, and legal inspections are not regulated by law (2004). The AWA in America has created many high standards created to keep animals safe and mitigate unneeded cruelty.

Laws and acts are made to set guidelines in society, but the enforcement of these acts is not brought to light. Like other acts, the AWA is set in place by the US Government, but enforcement falls under the administrator of APHIS (Cardon, 2012). The inspections of the lab are done by veterinary medical officers who then report to NCI, and are turned to the Investigative and Enforcement Services. The AWA and other acts are being enforced with fines and charges. Additionally, various administrative laws are put in place to ensure smooth cohesion in the process of animal testing. The Foundation of Biomedical Research said that institutions are required to state their reasons for the use of animals in testing. The IACUC is required by law to oversee the experiments done on the animal. IACUC committees consist of one veterinarian and one community representative, unaffiliated with the institution. They have the power to reject a proposal or cancel the project entirely (Foundation for Biomedical Research). The IACUC ensures that the testing is ethical and if the proper standards are not met, the test and project are scrapped. With the IACUC in place to enforce the AWA, many other acts follow to make their enforcers. The Health Research Extension Act of 1985, posted by the National Institute of

Health, stated that there must be a chief executive officer, a veterinarian, and a person unaffiliated with the group. These people must review the care and treatment of the animals alongside keeping files to prove that the reviews have been conducted (NIH, n.d). Much like the IACUC, this committee was created for the enforcement of the Health Research Extension Act of 1985. Roles and committees have been created for the sake of animal safety. All employed conduct reviews and careful analysis to make sure ethical care is provided. With the enactment of the AWA and enforcement of the laws, animal care has been the number 1 priority in laboratories. The National Institute of Health made a guideline so that it can be ensured that the animals are treated safely with health being prioritized. Testing of animals is considered a privilege, institutions must care for the animals in the most ethical, humane way possible (NIH, 2012). If deemed unethical, facilities may close from their visible neglect. The care of animals is important all around. The AWA has set high standards for housing, feeding, cleanliness, ventilation, and medical care (The Foundation of Biomedical Research, n.d). The AWA caused many changes in the scientific community that provided ethical and medical care while also providing basic necessities. The National Institute of Health stated that investigators must presume procedures will be harmful unless scientifically or medically proven otherwise. They also make sure that animals are sedated and that surgery or painful procedures can only be done on anesthetized animals. They argue that with procedures, surgery, and research, pain/distress levels in animals can be reduced. The creation of the AWA sparked an uproar over guidelines and the care of animals in testing. Following the AWA, many guidelines and rules were created to help the animals decrease unnecessary pain or distress. With the inclusion of housing, feeding, cleanliness, and ventilation along with sedation, animals are calmer and more open to cooperating.

With the AWA, the IACUC enforcing it, proper care decreases the harmful and painful effects of testing. The IACUC has veterinarians, unaffiliated committee members, and executive officers. They enforce the guidelines and rules planted by the Animal Welfare Act. The guidelines offer animals basic living requirements and ethical treatment. It also offers proper care like housing and cleanliness. The implication of this is the better treatment of animals and possibly less testing. The solution is to make better laws that fully cover the minute details that can further the care of animals. The consequences would be less testing and possibly more illegal testing. The information presented can help the overall team as without these laws, the environmental and ethical lenses would not be possible.

References

American Anti-Vivisection Society. (2024, October 16). Problems with animal research -

American Anti-Vivisection Society.

<https://aavs.org/animals-science/problems-animal-research/>

Animal Legal Defense Fund. (2022, August 9). Animals used in research - *Animal Legal Defense Fund.*

https://aldf.org/focus_area/animals-used-in-research/#:~:text=According%20to%20the%20U.S.%20Food,use%20%E2%80%94%2092%25%20are%20not.

Cardon, A. D., Bailey, M. R., & Bennett, B. T. (2012). The Animal Welfare Act: From enactment to enforcement. *Journal of the American Association for Laboratory Animal Science: JAALAS*, 51(3), 301–305.

Foundation for Biomedical Research. (n.d.) About animal testing regulations. *FBR*

<https://fbresearch.org/animal-care/animal-testing-regulations>

H.R.724 - 116th congress (2019-2020): PACT act. library of congress. *Library of Congress.*

<https://www.congress.gov/bill/116th-congress/house-bill/724>

Health Research Extension Act of 1985 | *OLAW*. (n.d).

<https://olaw.nih.gov/policies-laws/hrea-1985.htm>

International guiding principles for biomedical research ... (n.d.-d).

https://grants.nih.gov/grants/olaw/guiding_principles_2012.pdf

National Academies Press (US). (2004). Japanese regulations on animal experiments: Current status and perspectives. *The Development of Science-based Guidelines for Laboratory*

Animal Care - NCBI Bookshelf. <https://www.ncbi.nlm.nih.gov/books/NBK25422/>

The Animal Welfare Act. (n.d.-b). <https://faolex.fao.org/docs/pdf/swe19544E.pdf>

How can the government's role in shaping U.S. food safety standards help the food industry?

Did you know food in specific places have less regulation or care given to them. We can see this though the food safety standard in the USA is a very complex system. Throughout the USA people rely on the safety provided by this organization. Many people overlook how the government works on protecting their citizens. With illnesses appearing constantly, food safety regulation is getting less attention. According to many food safety articles we can see a distinct change in laws or regulation in food. The people entrust the government with their health and sustainability but by not allowing laws to be impacted by their change.

The government regulates food safety with other districts such as the FDA and the USDA. This teamwork helps build trust with the community as each holds outstanding records. The popularity of the USDA shows how many citizens actively rely on the people in this department. Trusting the government can be hard for someone who has faced injury through it. Companies all around the world show deep care in not allowing their reputation to hold them back. As scandals are a dime a dozen for food industries, some may face harsher criticism or retaliations due to their consumers.

Laws regarding food make it so that not one company is on top or above the law. It shows a clear understanding by allowing smaller organizations to slowly start to grow. Though the companies and industries all follow the exact same law it can often start to bend if they

can hide it well. To keep their industry productive and create more jobs and money for their workers many businesses cut back on certain things. To increase production, they just make it so that one of the jobs they have is basically useless. Money or tradition is the only thing keeping many businesses alive with the want to be able to collect or receive goods. Between creating new policies or enforcing older ones many politicians start to choose sides not wanting to invest more money into the government.

Outside the US we can see the stream of markets popping up everywhere, even if they are not as popular in the regional area, they may have a chance in the international market if their product is good or there an want or need for it. The distribution of food to offshore places shows how even if somebody doesn't want or need the market there is always someone who does. An example of this is the plant "Casava" it is a common plant that help many African countries in survival becoming a staple food in the community. But this can only be seen in African countries as rarely does its popularity move. The plants roots help many families in time of drought as they are quite resistant. This plant is quite-common in drought areas but with a more open market in other countries it shows a decline in sales.

Experiments on food have changed drastically over the years, many creating illnesses in the food or destroying illness in the food. With regulations being all around in the scientific community it is quite hard to find food without specific laws on it. As time goes on people want something new, just a little change to what they eat but they don't want to change the look.

IRR Sample C 3 of 4

The iconic look of fruits and vegetables are unforgettable, only the color changes if you find a different species. But under certain circumstances there has been many time where scientists genetically altered fruit. This can range from a different color or taste depending on what is popular for their consumers. Only the government can approve of these changes as long as they can prove that the food is edible and healthy. Leaving dangerous chemicals in the body can cause great harm to someone, often leading to a lawsuit.

Demand for food shows what many of the food markets are successful and which ones are not. It is often seen in bigger cities that regulation can start to falter is they see the profit margins increase. However, during many statewide regulations, they are commonly found and induce a multitude of lawsuits or fines. In my opinion, I think that the laws installed by the government show not only understanding for their people and their health but also how differently laws can create or help others. The agriculture of the world holds us back as people don't know what they are eating but it is the duty of the USA to find out what it is, how it works and if it hurts their citizens.

In society many people don't often disclose what they've eaten in the regular and usually blame illness in the food that have be overlooked by the inspectors. This leads to many cases of food contamination or illness. I recent years many news outlets have cracked down on the hidden world of food and the agriculture business. Headlining many top articles precising or dismissing allegations in the industry.

In conclusion, people around the world have better living condition. Though with the most people can do is wash food with water or be able to afford harsh cleaning chemicals. That

may end up in even more trouble if they are not properly used, causing injury in or around the industry. If this goes on, we can see how people are affected by different chemicals leading to many changes in the production methods. However, in different countries we can either see a decline in food safety or more quality standards being implemented. WE can see this often in India and Japan. While India strives on an open culture oof food they often disregard things they can't see. Often resulting in hunger as more people get injured by the production plants. Though in Japan you can clearly see they care a lot about food health. With small implications being put on food for a better quality or quantity algorithm.

1,000 words

<https://www.cdc.gov/food-safety/index.html>

https://ijbpas.com/pdf/2023/October/MS_IJBPAS_2023_7482.pdf

Performance Task 1

Individual Research Report

Note: Student samples are quoted verbatim and may contain spelling and grammatical errors.

Overview

NEW for 2025: The question overviews can be found in the *Chief Reader Report on Student Responses* on [AP Central](#).

Sample A

1 Understand and Analyze Context Score: 6

2 Understand and Analyze Argument Score: 6

3 Evaluate Sources and Evidence Score: 6

4 Understand and Analyze Perspective Score: 6

5 Apply Conventions (Citation and Attribution) Score: 3

6 Apply Conventions (Grammar and Style) Score: 3

Row 1: Understand and Analyze Context

The report earned a score of **6** in this row because it demonstrates a clear focus on institutional factors that lead to burnout among orthopedic surgeons. With the exception of one journalistic source used to establish a public-facing context (*The Guardian*), the response draws upon a variety of peer-reviewed academic articles to address the complexities of the problem. It makes clear the significance of this issue within a larger context: patient access to and cost of quality medical care.

Row 2: Understand and Analyze Argument

The report earned a score of **6** for this row because it demonstrates a clear understanding of the sources' arguments, frequently through purposeful use. In the second paragraph, for example, key claims from clearly attributed sources are paraphrased without overstatement or oversimplification, illuminating specific organizational factors that contribute to burnout. On the bottom of p. 3, the validity of Chahal & Matwala's findings are emphasized through commentary explaining why "over two thirds of orthopedic surgeons may be experiencing poor health." On p. 4, the reasoning behind Bower's claim is discussed effectively, enabling readers to understand why "physician focused burnout interventions...lead surgeons to blame themselves[, which] can result in negative side effects."

Row 3: Evaluate Sources and Evidence

The report earned a score of **6** for this row by making purposeful use of well-chosen relevant and credible evidence from twelve peer-reviewed research articles. It demonstrates adequate acknowledgement of possible media bias when using the *Guardian*, "a left-wing newspaper" on p. 1) to help establish a public-facing context. Although not strictly necessary because of the use of almost exclusively peer-reviewed sources, the report makes some additional use of attributive phrases that emphasize credibility.

Row 4: Understand and Analyze Perspective

The report earned a score of **6** for this row by identifying a range of perspectives and drawing explicit and relevant connections among them. Clear attribution and consistent citation linking enables a detailed discussion of specific relationships among arguments derived from sources. For example, in the discussion of institutional factors contributing to surgeon burnout (bottom of p. 1), the response synthesizes details from Ross, Kassam, Wes, and Travis' studies. This synthesis demonstrates why "an organizational directed approach related to work hours" (top of p. 2) is necessary to address occupational exhaustion. As this paragraph continues, perspectives regarding the pros and cons of limiting work hours are put into conversation, offering a nuanced and detailed discussion of why "a restriction in working hours may address some challenges that lead surgeons to burnout but not others."

Performance Task 1

Individual Research Report (continued)

Row 5: Apply Conventions (Citation and Attribution)

The report earned a score of **3** for this row because the References page is clearly organized (alphabetically) with all essential elements present. Sources are linked successfully through attributive phrasing and in-text citations. One exception occurs in par. 1, where it is a bit unclear where van Niekerk’s ideas end and commentary begins, due to the placement of the in-text citation early-on in the sentence, rather than at the end of the paraphrase. There is also some potential confusion when the author uses the attributive phrases “Dyrbye, co-director of Mayo Clinic’s physician wellbeing program” and “Dr. Shanafelt, a researcher on professional wellbeing” together with the parenthetical (Wes). A quick look at the bibliography makes clear that Wes, Drybye, and Shanafelt are collaborative authors. Although this might cause some confusion to readers, ultimately the bibliographic citation enables readers to quickly tell that all these perspectives emerge from the same source. Overall, flaws in attribution and citation are few and minor.

Row 6: Apply Conventions (Grammar and Style)

The report earned a score of **3** for this row because its prose communicates clearly in a style that is consistently appropriate for an academic audience. Though there are occasional flaws (e.g., imprecise labelling of the investigation’s lens as “systematic” rather than “systemic”, or lack of clarity as to what the word “others” is modifying at the end of paragraph 2), they do not impede the readers’ ability to understand the complex ideas discussed in this response.

Sample B

1 Understand and Analyze Context Score: 4

2 Understand and Analyze Argument Score: 4

3 Evaluate Sources and Evidence Score: 4

4 Understand and Analyze Perspective Score: 4

5 Apply Conventions (Citation and Attribution) Score: 2

6 Apply Conventions (Grammar and Style) Score: 2

Row 1: Understand and Analyze Context

This report earned a score of **4** for this row because it identifies an adequately focused area of investigation (legal aspects of animal testing) and shows some variety in source selection (e.g., one academic journal, several government agencies and relevant nonprofits). The response draws from cited sources to contextualize the overall problem (e.g., “80 million tests are done on animals annually, but only 8% have been deemed successful” on p.2). However, the last sentence identifies too many incremental aspects of the problem, namely, the Animal Welfare Act, a specialized committee [the IACUC], and “the administration of drugs to the animal before testing.” This research context is further extended in the body of the report with discussions of animal testing in Japan and NIH guidelines. Thus, the focus of the report is not always clear because it identifies too many aspects of the topic.

Row 2: Understand and Analyze Argument

This report earned a score of **4** for this row because it is dominated by summary of source material. At times, it also lacks clarity about what is from sources versus what is commentary (e.g., see discussion of “inspections of the lab...to ensure smooth cohesion in the process of animal testing” in the middle of p. 3). In some instances, however, the response provides effective explanation of authors’ reasoning (e.g., discussion of why the Anti-Vivisection Society argues that “patients and physicians should be wary of” animal testing on p. 2; rationale for NIH’s guidelines that “investigators must presume procedures will be harmful unless scientifically or medically proven otherwise” on p. 4).

Performance Task 1

Individual Research Report (continued)

Row 3: Evaluate Sources and Evidence

This report earned a score of **4** in this row because it is inconsistent in offering effective explanation of sources' credibility. The description of Cardon as "a researcher at the National Association for Biomedical Research" highlights credibility. However, the credibility and relevance of non-academic and outdated sources remains unaddressed (e.g. American Anti-Vivisection Society on p. 2; sources dated 1985 and 2004). Additionally, the report at times demonstrates a lack of understanding of evidence, making its relevance unclear (e.g., top of p. 3).

Row 4: Understand and Analyze Perspective

The report earned a score of **4** for this row because it includes multiple perspectives and makes some general connections among them. On pages 3-4, for example, the response discusses the Foundation for Biomedical Research and NIH's perspectives regarding the function and make-up of oversight committees that help to enforce the Animal Welfare and Health Research Extension Acts. Despite a lengthy discussion, the connection between perspectives remains general (e.g., "Roles and committees have been created for the sake of animal safety. All employed conduct reviews...to make sure ethical care is provided.") Overall, repetition of general connections prevents a nuanced and detailed discussion of how the sources' arguments relate.

Row 5: Apply Conventions (Citation and Attribution)

The report earned a score of **2** in this row because there is uniformity in the citation style and some successful linking of citations to bibliographic references. On p. 2, for example, the in-text citations successfully link the Animal Defense Fund, American Anti-Vivisection Society, and Foundation for Biomedical Research to their corresponding entries on the alphabetized reference page. On p. 3, however, Kagiya and Tasuji's argument is discussed, but it is unclear which source this comes from since their names do not appear in the bibliography. Examples like the latter one are prevalent throughout the report. Moreover, essential elements are missing for several citations on the reference page (e.g., authors of the report on Japanese Regulations on Animal Experiments; author/organization and publisher for "International guiding principles for biomedical research").

Row 6: Apply Conventions (Grammar and Style)

The report earned a score of **2** in this row because, although generally clear, it contains some grammatical flaws and imprecise word choices that sometimes interfere with the clear communication of complex ideas. The following sentences exemplify these issues: "With the IACUC in place to enforce the AWA, many other acts follow to make their enforcers" (p. 3); "[M]any guidelines and rules were created to help the animals decrease unnecessary pain or distress" (p. 4). Additionally, the report occasionally lapses into colloquial language inappropriate for an academic report (e.g., "the test and project are scrapped" on p. 3; "rules planted by the Animal Welfare Act" on p. 5).

Performance Task 1

Individual Research Report (continued)

Sample C

1 Understand and Analyze Context Score: 2

2 Understand and Analyze Argument Score: 2

3 Evaluate Sources and Evidence Score: 2

4 Understand and Analyze Perspective Score: 2

5 Apply Conventions (Citation and Attribution) Score: 1

6 Apply Conventions (Grammar and Style) Score: 1

Row 1: Understand and Analyze Context

This report earned a score of **2** for this row because it shows little evidence of research. While the title signals some focus (U.S. government safety standards and the food industry), the introduction oversimplifies the context for a report: “According to many food safety articles we can see a distinct change in laws or regulation in food.” There are no in-text citations or sources mentioned in the response to tie discussions to particular sources. Nor does the bibliography, which consists of two URLs, provide enough context for a research report. Overall, the response demonstrates an overly broad area of investigation with little research.

Row 2: Understand and Analyze Argument

This report earned a score of **2** for this row because it does not anchor ideas to sources. Due to the lack of attribution, readers cannot tell what information or arguments in the response come from the two URLs listed in the bibliography. At times, the response signals opinion, rather than reporting on information or arguments from sources: “In my opinion, I think that the laws...”

Row 3: Evaluate Sources and Evidence

This report earned a score of **2** in this row because the credibility of sources is not addressed, and the relevance of evidence to the inquiry is unclear. On p. 2, for example, the response discusses the example of the drought-resistant “‘Casava’...a common plant that help many African countries in survival becoming a staple food in the community.” The source of this evidence is unattributed and there is no discussion of its relevance to an investigation of the government’s role in shaping U.S. food safety standards.

Row 4: Understand and Analyze Perspective

The report earned a score of **2** for this row because it does not identify or discuss a perspective, defined in AP Seminar as a point of view conveyed through a source’s argument. Though there are occasional references to general points of view (e.g., “Many people overlook” and “According to many food safety articles” on p. 1, and “people around the world” on p. 3), there are no identifiable source arguments presented and, thus, no perspectives.

Row 5: Apply Conventions (Citation and Attribution)

The report earned a score of **1** in this row because it contains no in-text citations or attributions, and the bibliography does not contain essential elements of citation.

Row 6: Apply Conventions (Grammar and Style)

The report earned a score of **1** in this row because its many grammatical errors and uncontrolled sentences impede communication. Many passages are incoherent, and the overall style is not appropriate for an academic report. The prose on the bottom of p. 3 exemplifies these issues: “In society many people don’t often disclose what they’ve eaten in the regular and usually blame illness in the food that have be overlooked by the inspectors.” Or “Headlining many top articles precising or dismissing allegations in the industry.