Immunization Verification at Christian Camps

Katherine Stacey

A Senior Thesis submitted in partial fulfillment
of the requirements for graduation
in the Honors Program
Liberty University
Spring 2021

Acceptance of Senior Honors Thesis

This Senior Honors Thesis is accepted in partial
fulfillment of the requirements for graduation from the
Honors Program of Liberty University.

_____
Jonathan Geukgeuzian, D.Ed.Min.
Thesis Chair

_____
P. Adam McClendon, Ph.D.
Committee Member

_____
James H. Nutter, D.A.
Honors Director

_____
Date

Abstract

No standard exists among Christian camps regarding immunization verification for program participants. The best practice for Christian camps regarding immunization verification is debated because of religious reasons, camper and staff safety, and state mandates. This research examines the current practice of Christian Camp and Conference Association (CCCA) affiliated camps regarding immunization verification. It was conducted by emailing a seven-question survey to over 700 CCCA camps. Just over 100 camps responded. The study found that roughly two-thirds of CCCA camps practice no method of immunization verification. In response to this result, the researchers propose a best practice for Christian camps regarding immunization verification based on American Association of Pediatrics (AAP) guidelines.

Immunization Verification at Christian Camps

Introduction

In a typical year, over fourteen million people attend a session of camp in the United States. The American camping industry is worth over $18 billion, employing well over a million people at over 14,000 camps.[1] The impact these camps have had and will continue to have cannot be overstated. Outcomes of camp for youth include "organization, self-identity, emotion regulation, and to a lesser degree, self-confidence and relationship skills."[2] The development of these outcomes can be attributed to strategic programming designed and implemented by camp staff. Many aspects of campers' growth are an inherent result of the camp setting: independence, appreciation for diversity, community, and teamwork.[3]

While these and countless other benefits are inherent to camp, the camp setting is also intrinsically conducive to the spread of diseases.[4] Youth are removed from their familiar home setting and placed in an unfamiliar context with tens or hundreds of other campers. Although interacting with peers strengthens interpersonal qualities, it increases the chances of spreading disease.[5] Many camp activities involve coming in close contact with other persons and sharing

---

[1] American Camp Association, "ACA Facts and Trends," ACA Camps, accessed December 18, 2020, https://www.acacamps.org/press-room/aca-facts-trends.

[2] Dan Richmond, Jim Sibthorp, and Cait Wilson, "Understanding the Role of Summer Camps in the Learning Landscape: An Exploratory Sequential Study," *Journal of Youth Development 14*, no. 3 (2019): 24. http://jyd.pitt.edu/ojs/jyd/article/view/19-14-03-FA-01/872.

[3] Dan Richmond, Jim Sibthorp, and Cait Wilson, "Understanding the Role of Summer Camps," 23.

[4] Tsalik, Ephraim L. et al., "Clinical presentation and response to treatment of novel influenza A H1N1 in a university-based summer camp population," *Journal of Clinical Virology* 47 (2010): 286.

[5] Laura L. Blaisdell et al., "Preventing and Mitigating SARS-CoV-2 Transmission — Four Overnight Camps, Maine, June–August 2020," *Morbidity and Mortality Weekly Report* 69, no. 35 (2020): 1217. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7470465/.

equipment. Recognizing the long, full days and short nights associated with camp, some question the influence of fatigue on illness at camps.[6] Just as many benefits of camp are tied to its nature, so are many of its risks.

Disease outbreak at camps has many detrimental effects on the participants and the organization. The most obvious and notable effect is the potential for a lasting injury or death of campers or staff members because of the disease.[7] Even if the camper or staff member does not experience serious lasting effects because of the disease, they may spread it to an immunocompromised or at-risk individual who would experience the adverse effects of the disease more severely. Additionally, disease outbreaks at camps may lead to a shortened camp season if the camp must close because of the outbreak.[8] This shortened season results in financial deficits and a lesser amount of time to impact campers. Sick staff cannot work, so a disease outbreak may result in being understaffed. Many issues come with a disease outbreak at camp.

Risk management is a key aspect of the operation of any camp. Keeping the balance of an appropriate perceived risk compared to the lowest possible actual risk is essential to programming activities that stimulate campers' growth. One aspect of camp that should both appear and be safe is the way camps care for the health of their program participants (campers and staff). Camp directors should take reasonable precautions to protect their program

---

[6] American Camp Association, "The Healthy Camp Study: Impact Report," ACA Camps, accessed December 18, 2020, https://www.acacamps.org/downloads/healthy-camp-study-impact-report.

[7] Thomas Novotny et al., "Measles Outbreaks in Religious Groups Exempt from Immunization Laws," *Public Health Reports* 103, no. 1 (1988): 49.

[8] Hannah Lebovits, "We sent our kids to summer camp. It shut down with a COVID-19 outbreak after just a few days. This is what school will look like," Business Insider, August 5, 2020, https://www.businessinsider.com/covid-broke-out-at-our-kids-camp-this-is-what-school-will-look-like-2020-7.

participants from disease outbreaks. According to the AAP, one necessary precaution is that all campers should be fully vaccinated.[9] To ensure this precaution is fulfilled, the researchers recommend camps verify the status of the immunizations of their campers and staff. Christian camps, for various reasons, hold opposing positions regarding immunization verification for their program participants. These reasons will be explored in the following literature review, as well as a recollection of historic guidelines from the AAP. The following literature review and discussion of the current practices of CCCA affiliated camps will be based on a recent empirical study. This thesis will conclude with a discussion of best practices for camps to protect program participants from the various risks immunization verification presents and those it mitigates.

Literature Review

CCCA camps hold their position on immunization verification for many reasons. Those that do not verify camper immunizations cite factors such as religious reasons, safety, state mandates, and camp-specific concerns. Those who verify camper immunizations do so for camper and staff safety and because of state mandates. Each of these points will be explored further, with information that should be considered when understanding the survey discussed in the Results section.

[9] Michael J. Ambrose and Edward A. Walton, "Improving Health and Safety at Camp," *American Academy of Pediatrics* 144, no. 1 (2019): 3. https://pediatrics.aappublications.org/content/144/1/e20191355.

Reasons Camps do not Verify Immunizations

Religious Reasons

Some camps do not verify that their program participants are vaccinated for religious reasons. One main concern is the fact that some vaccines use aborted babies for research. This traditionally Catholic concern has been questioned in light of the COVID-19 pandemic.[10] Those who do not verify immunizations for this religious reason found their opinion on the "illicit origin of human sources of biological material" and the "the dignity of the person."[11] The sanctity of human life, rooted in Genesis 1:27-28, is a key point in the argument against immunization verification.

A second religious objection to immunization verification is some people see vaccines as "playing God." Additionally, negative effects that sometimes accompany immunizations are seen as retribution for taking part in a sinful practice. According to Gordana Pelčić, et al., "Orthodox Protestant parents who refuse vaccination on religious grounds. . . claim that vaccination is an act of interfering with divine providence. Those who actually vaccinated their children consider the side-effects of vaccination as a God's sign that they made a wrong decision."[12] As with many debated current medical practices, vaccinations are seen by some as an orchestration by man of what only God should arrange. Some camps recognize their participants will be against

---

[10] Chelsey Cox and Miriam Fauzia, "Fact check: COVID-19 vaccine 'morally acceptable,' Vatican says, but some claims missing context," USA Today, December 29, 2020, https://www.usatoday.com/story/news/factcheck/2020/12/29/fact-check-covid-19-vaccines-morally-acceptable-vatican-says/4014905001/.

[11] Gordana Pelčić, et al., "Religious exception for vaccination or religious excuses for avoiding vaccination," *Croatian Medical Journal* 57, no. 5 (2016): 517. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5141457/.

[12] Gordana Pelčić, et al., "Religious exception for vaccination."

vaccinations because of this religious reason, and therefore do not verify that their campers are immunized.

Safety

The questioned safety of vaccinations is another key reason camps do not verify their campers' immunizations. One well-known safety issue is the question of whether autism is linked to vaccinations. Andrew Wakefield, in a 1999 edition of *The Lancet*, postulated that autism is linked to the MMR vaccine.[13] However, this study has been researched further and found to be grossly inaccurate. Jeffrey Gerber and Paul Offit write that twenty studies conducted show no correlation between vaccinations and autism. Performed across "several countries by many different investigators who have employed a multitude of epidemiologic and statistical methods. . . a level of statistical power sufficient to detect even rare associations" has been found through these studies. No such correlation exists between autism and vaccines.[14] However, concerns persist that some vaccines are unsafe because of Wakefield's study.[15]

Additional safety concerns concerning vaccinations may spring from the numerous side effects that accompany the immunizations recommended in most states. The influenza vaccine is often accompanied by redness, swelling, pain, tenderness, headaches, nausea, fever, and muscle

[13] Andrew J. Wakefield, "MMR vaccination and autism," *The Lancet* 354, no. 9182 (1999): 949. https://www.thelancet.com/journals/lancet/article/PIIS0140673605756968/fulltext.

[14] Jeffrey S. Gerber and Paul A. Offit, "Vaccines and Autism: A Tale of Shifting Hypotheses," *Clin Infect Dis.* 48, no. 4 (2009). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2908388/.

[15] Jeffrey S. Gerber and Paul A. Offit, "Vaccines and Autism."

aches.[16] Common side effects of the diphtheria, tetanus, and whooping cough (DTaP) vaccine are redness, swelling, pain, tenderness, body aches, fatigue, and fever.[17] The inactivated poliovirus (IPV) vaccine can cause fainting, shoulder pain from the shot, or allergic reactions.[18] The measles, mumps, and rubella (MMR) vaccine can cause a sore arm from the shot, fever, a mild rash, and temporary pain and stiffness in the joints.[19] Side effects of the chickenpox (Varicella) vaccine are a sore arm from the shot, fever, mild rash, temporary pain, and stiffness in the joints.[20] The Hepatitis B (Hep B) vaccine is linked to soreness, redness, or swelling in the arm, headaches, and fever.[21] The Haemophilus Influenza Type B (Hib) vaccine can cause redness, warmth, or swelling from the shot and a fever.[22] The Pneumococcal Vaccine (PCV) may cause a reaction where the shot was given, redness, swelling, pain or tenderness, fever, loss of appetite, fussiness or irritability, feeling tired, headaches, or chills.[23] Although all these side effects are

[16] Centers for Disease Control and Prevention, "Flu Vaccine Safety Information," CDC, Centers for Disease Control and Prevention, revised September 17, 2019, https://www.cdc.gov/flu/prevent/general.htm.

[17] Centers for Disease Control and Prevention, "Whooping Cough Vaccines are Safe but Side Effects Can Occur," CDC, last modified June 29, 2017, https://www.cdc.gov/pertussis/pregnant/mom/safety-side-effects.html.

[18] Centers for Disease Control and Prevention, "Polio Vaccination: What Everyone Should Know," CDC, last modified May 4, 2018, https://www.cdc.gov/vaccines/vpd/polio/public/index.html.

[19] Centers for Disease Control and Prevention, "Measles, Mumps, Rubella (MMR) Vaccine," CDC, last modified September 9, 2020, https://www.cdc.gov/vaccinesafety/vaccines/mmr-vaccine.html.

[20] Centers for Disease Control and Prevention, "Chickenpox (Varicella) Vaccines," CDC, last modified September 9, 2020, https://www.cdc.gov/vaccinesafety/vaccines/varicella-vaccine.html.

[21] Centers for Disease Control and Prevention, "Hepatitis B Vaccines," CDC, last modified September 9, 2020, https://www.cdc.gov/vaccinesafety/vaccines/hepatitis-b-vaccine.html.

[22] Centers for Disease Control and Prevention, "Haemophilus Influenza Type B (Hib) Vaccines," CDC, last modified September 9, 2020, https://www.cdc.gov/vaccinesafety/vaccines/hib-vaccine.html.

[23] Centers for Disease Control and Prevention, "Pneumococcal Vaccination: What Everyone Should Know," CDC, last modified August 7, 2020, https://www.cdc.gov/vaccines/vpd/pneumo/public/index.html.

rarely serious, they are enough to make some people question the safety of vaccines. Because of this safety concern, some camps do not verify that their campers are vaccinated.

A final and more recent concern regarding immunizations is the questioned safety of the newly developed SARS-CoV-2 vaccine. According to the CDC, "The U.S. Food and Drug Administration (FDA) has granted Emergency Use Authorizations (EUA) for two COVID-19 vaccines which have been shown to be safe and effective as determined by data from the manufacturers and findings from large clinical trials."[24] However, because these vaccines are currently so new, their long-term effects are unknown. Furthermore, their effects and effectiveness on children are still in question. As of September 2020, researchers Douglas Opel, Douglas Diekema, and Lainie Friedman Ross concluded that "we currently know too little about the performance of any of the candidate COVID-19 vaccines or the epidemiology of SARS-CoV-2 in children to make any firm judgments about whether a COVID-19 vaccine should be mandatory in children."[25] This vaccine is something camps will have to wrestle with as time progresses and more information is ascertained regarding its safety and effectiveness for children.

State Mandates

An additional reason some camps do not verify that their campers are vaccinated is that the state in which they are located already mandates youth be immunized to attend public

[24] Centers for Disease Control and Prevention, "Ensuring the Safety of COVID-19 Vaccines in the United States," CDC, last modified December 22, 2020, https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety.html.

[25] Douglas J. Opel, Douglas S. Diekema, and Lainie Friedman Ross, "Should We Mandate a COVID-19 Vaccine for Children?" *Jama Pediatrics* (2020). https://jamanetwork.com/journals/jamapediatrics/article-abstract/2770123.

schools, without exception. Currently, there are five such states in the US: California, New York, Maine, West Virginia, and Mississippi.[26] These states require different vaccines but do so without an exemption for religious or philosophical reasons. California requires students to get the Hep B, DTaP, IPV, MMR, Varicella, and Hepatitis A (Hep A) vaccines. New York, West Virginia, and Mississippi all mandate the Hep B, DTaP, IPV, MMR, and Varicella vaccines. Maine requires its students to get the DTaP, IPV, MMR, and Varicella immunizations.[27] In these states, exemptions are given neither for religious reasons nor personal beliefs. Hence, some camps in these states do not see it necessary to verify that their campers have been vaccinated.

Camp Specific Reasons

In addition to information gathered through the seven-question survey, the following anecdotal items were mentioned by survey responders as reasons they do not verify immunizations: verification has never been considered, vaccinations are required but not verified, verification is an additional step for camper registration, and the camp only hosts groups. For many camps, immunization verification has never been considered. Tradition dictated policy. Whatever the reason, many camps simply have never considered verifying camper immunization. Others require their campers to be vaccinated, but do not verify that campers have received their immunizations. Vaccine verification is a time-consuming and sometimes complex step that makes camper registration more difficult. Some camps do not

[26] National Conference of State Legislatures, "States With Religious and Philosophical Exemptions From School Immunization Requirements," NCSL, last modified June 26, 2020, https://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx.

[27] ProCon.org, "State-by-State: Vaccinations Required for Public School Kindergarten," ProCon.org, last modified August 20, 2020, https://vaccines.procon.org/state-by-state-vaccinations-required-for-public-school-kindergarten/.

verify camper vaccinations because they want registration to be as easy as possible. Lastly, some camps do not require their program participants' vaccinations to be verified because they only host groups, similar to a convention center or a hotel. They see the verification of vaccinations as the responsibility of the organizing party, not the host location.

Reasons Camps Verify Immunizations

Just as there are several reasons camps do not verify their campers' immunizations, there are many reasons those who do verify immunizations hold this stance. Similar to the opposing viewpoint, camps verify camper immunizations for camper safety, staff safety, and because of state mandates.

Camper Safety

Recommended for All Children. The AAP recommends the Hep B, Rotavirus (RV), DTaP, Hib, Pneumococcal conjugate (PCV13), Inactivated poliovirus (IPV), Influenza, MMR, Varicella, and Hep A vaccines and boosters before children reach eighteen months of age. The Tdap, Human papillomavirus (HPV), and Meningococcal vaccines and boosters are all recommended for children between the ages of eighteen months and eighteen years, with varying ages suggested based on the vaccine.[28] This vaccine schedule (Figure 1) is suggested, with minor alterations for extenuating circumstances or late doses, for all children eighteen or under, except for those with immunodeficiencies.[29] According to the AAP:

[28] American Academy of Pediatrics, "Immunization Schedules for 2020," AAP, last modified February 3, 2020, https://redbook.solutions.aap.org/selfserve/ssPage.aspx?SelfServeContentId=Immunization_Schedules.

[29] American Academy of Pediatrics, "Immunization Schedules."

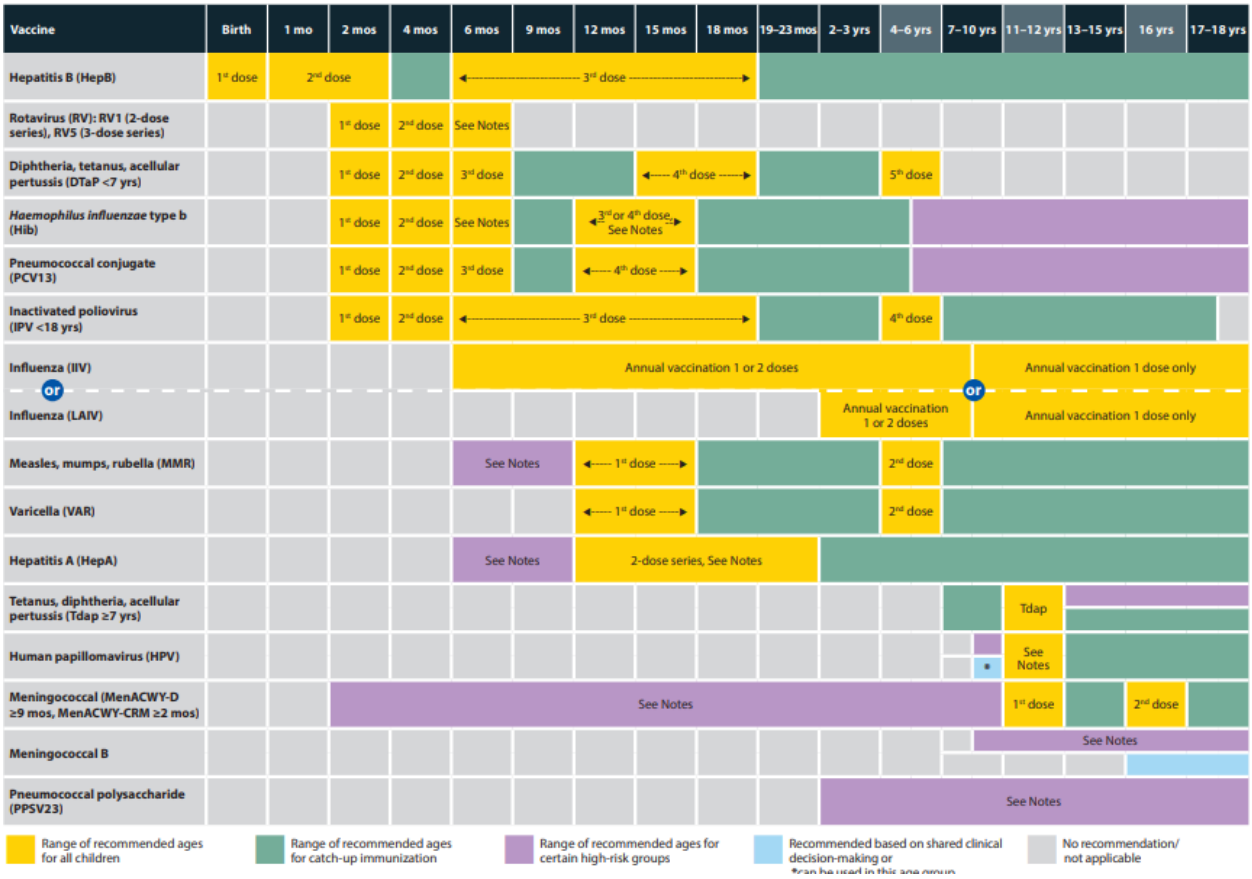

Figure 1. AAP Point-of-Care Solutions, "Immunization Schedules for 2020," AAP (2020): https://redbook.solutions.aap.org/selfserve/ssPage.aspx?SelfServeContentId=Immunization_Schedules

> This schedule is recommended by the Advisory Committee on Immunization Practices (ACIP) and approved by the Centers for Disease Control and Prevention (CDC), American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP), American College of Obstetricians and Gynecologists (ACOG), and American College of Nurse-Midwives (ACNM).

This schedule shows the vaccines recommended for all children for their safety. Because of the many vaccines recommended by medical experts, many camps believe immunization verification is beneficial for camper safety and therefore require it.

Recommended for Schools. Additionally, public schools across the United States require a number of vaccines for the majority of their students. All fifty states and Washington, DC require their students to get the DTaP, IPV, MMR, and Varicella vaccines. Additionally,

forty-three states and Washington, DC require their students to get the Hep B vaccine. Connecticut, North Carolina, and Wyoming require students to get the Hib vaccine. Connecticut and Washington, DC require students to get the PCV vaccine. Finally, Massachusetts requires students to get the flu shot.[30] In forty-five states and Washington, DC, religious exemptions to vaccines are allowed. This exemption "Indicates that there is a provision in the statute that allows parents to exempt their children from vaccination if it contradicts their sincere religious beliefs."[31] Additionally, in fifteen states, philosophical exemptions to vaccines are allowed. This exemption "Indicates that the statutory language does not restrict the exemption to purely religious or spiritual beliefs. For example, Maine allows restrictions based on 'moral, philosophical or other personal beliefs,' and Minnesota allows objections based on conscientiously held beliefs of the parent or guardian.'"[32]

Recommended for Camps. The ACA has a number of recommendations for camps regarding immunization verification. These recommendations emerged in light of the 2015 Measles outbreak and are applicable today. The ACA requires camps within their association to use a health form which has "A statement from the custodial parent/guardian attesting that all immunizations required for school are up to date and including the actual date (month/year) of last tetanus shot. . . ."[33] However, as of 2019, the ACA allowed exemptions for non-vaccinated

[30] ProCon.org, "State-by-State."

[31] National Conference of State Legislatures, "States With Religious and Philosophical Exemptions."

[32] National Conference of State Legislatures, "States With Religious and Philosophical Exemptions."

[33] American Camp Association, "Emerging Issues: Immunizations, Measles, and other Communicable Diseases," ACA Camps, April 2015, https://www.acacamps.org/resource-library/campline/emerging-issues-immunizations-measles-other-communicable-diseases.

campers because of religious and philosophical exemptions or medical reasons. They noted, however, that camps must recognize the risk that comes with allowing non-vaccinated campers and weigh these risks accordingly.[34] Here, the AAP differs in its recommendation:

> Before starting camp, all campers and staff should be in compliance with the recommended childhood immunization schedule published annually by the American Academy of Pediatrics (AAP), the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention (CDC), and the American Academy of Family Physicians. . . Camp administrators should be aware that individual states might require other immunizations in addition to those recommended by these organizations. *Immunization requirements for participation at camp provide a safe environment for those participating*.[35]

They furthermore note:

> Nonmedical exemptions to required immunizations are inappropriate, and these exemptions should be eliminated by camps. Participation by campers and staff who are incompletely immunized or unimmunized because of nonmedical exemptions is inappropriate for individual, public health, and ethical reasons. Camps should support medical exemptions to specific immunizations as determined for each individual (eg, those with congenital conditions, with compromised immune systems, or taking specific medications).[36]

A final instance that highlights the importance of immunization verification for camper safety is a 2005 outbreak of mumps at a New York summer camp. A study was conducted to find the effectiveness of the vaccination in protecting campers for this instance. This study was possible because of a "retrospective review of immunization records for 507 attendees who were

---

[34] American Camp Association, "Measles Update for the 2019 Summer Camp Season," ACA Camps, May 20, 2019, https://www.acacamps.org/news-publications/blogs/camp-connection/measles-update-2019-summer-camp-season.

[35] Michael J. Ambrose and Edward A. Walton, "Improving Health and Safety at Camp," 3. Emphasis added.

[36] Michael J. Ambrose and Edward A. Walton, "Improving Health and Safety at Camp," 3.

eligible for vaccination and had verified immunization history."[37] This study concluded and confirmed two doses of the mumps vaccine were needed for the camper to gain optimal immunity.[38] This outbreak and subsequent study highlight the importance of immunization and verification for the protection of campers.

Staff Safety. Many camps verify immunizations for the safety of their staff. Both the ACA and AAP recommend immunization verification for staff safety. The ACA emphasizes the importance of verifying the vaccinations of international staff, as many countries do not follow the same rigorous immunization schedule the United States does.[39] As with campers, the ACA echoes that risks accompany hosting unvaccinated staff.[40] Like previously noted, the AAP also says, "all. . . staff should be in compliance with the recommended childhood immunization schedule. . . ."[41] Because it is beneficial for staff safety, some camps verify program participant vaccination.

State Mandates. One reason some camps verify their campers' immunizations is that they are required to by the state in which they are located. For instance, Massachusetts requires camps within the state to certify their campers' immunizations through written documentation. This documentation may include "any form or letter signed and dated by a physician or designee,

---

[37] Joshua K. Schaffzin et al., "Effectiveness of Previous Mumps Vaccination during a Summer Camp Outbreak," *Pediatrics* 120, no 4. (2007): e862.

[38] Joshua K. Schaffzin et al., "Effectiveness of Previous Mumps Vaccination," e867.

[39] Marla Coleman, "American Camp Association Immunization Recommendations for International Staff," ACA Camps, accessed January 20, 2021, https://www.acacamps.org/resource-library/campline/american-camp-association-immunization-recommendations-international-staff.

[40] American Camp Association, "Measles Update."

[41] Michael J. Ambrose and Edward A. Walton, "Improving Health and Safety at Camp," 3.

or. . . a dated report from the Massachusetts Immunization Information System; provided that either document specifies the month and year of administration and the type/name of the vaccines(s) administered to the camper or staff person, or alternative evidence of immunity."[42] Massachusetts does permit religious and medical exemptions from immunizations for camp program participants. However, in these cases, written documentation of the exemption must be submitted to the camp and recorded. The Massachusetts requirements for camps notes, "In situations when one or more cases of a vaccine-preventable or any other communicable disease are present in a camp, all susceptible children, including those with medical or religious exemptions, are subject to exclusion. . . ."[43] Although not all campers are required to be vaccinated, camps in Massachusetts are all required to know the status of their campers' immunizations and act accordingly. These requirements vary from state to state and are the reason some camps verify immunizations.

Furthermore, the potential exists that the COVID-19 vaccine may be required to attend school and play youth sports. Since the camp environment (day camp and overnight) includes camper interaction in close proximity, they may require COVID-19 immunizations also. If this vaccine is required to attend camps, then the verification of this vaccine may be required. This vaccine presents an additional potential state mandate that camps may have to consider regarding immunization verification.

[42] Massachusetts Department of Public Health, *Minimum Standards for Recreational Camps for Children (State Sanitary Code, Chapter IV)*, 105 CMR 430.000, 12.

[43] Massachusetts Department of Public Health, *Minimum Standards for Recreational Camps*, 12.

Past Recommendations and Current Practices

Because of the similar bases for these opposing viewpoints, camps may find ascertaining the best practice for immunization verification difficult. However, an additional important concept to consider is the recommendations from medical experts for camps regarding immunization verification practices. The guidelines from the AAP over the past twenty years offer a range of suggestions for camps that have influenced the ACA's current practice.

Historic AAP Recommendations

The AAP's recommended best practice for camps regarding immunizations and their verification has changed several times over the past twenty years. These practices reflect possible approaches for CCCA camps toward immunization verification. A discussion of the strengths and weaknesses of each approach follows the description of the approaches.

2000 Recommendation. In the AAP's 2000 health guidelines for camps, they recommend "All camps should be in compliance with immunization schedules recommended by the AAP and as required by state and local health departments."[44] Furthermore, they recommend:

> Camp personnel should request and keep on file the following information: . . . Immunizations: full record of series according to the "Recommended Childhood Immunization Schedule-United States," which is published every January by the AAP, the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention, and the American Academy of Family Physicians.[45]

[44] Committee on School Health, "Health Appraisal Guidelines for Day Camps and Resident Camps," *Pediatrics* 105, no. 3 (2000): 643.

[45] Committee on School Health, "Health Appraisal Guidelines," 644.

Lastly, this document says camps should ask "whether the child has had chickenpox (varicella)" and "whether the child has been immunized against chickenpox."[46] This recommendation is less stringent than those published later. Camps that follow this model would ask for the program participant's immunization history but not require it. Furthermore, the immunization history submitted would not be verified; therefore, falsification is possible.

2005 Recommendation. In the 2005 health guidelines for camps, the AAP updated their recommendations to include the following:

> Within a period determined by the camp, but before the child's first day of camp, parents or guardians should be required to provide camp authorities with a comprehensive health history. This history should include the child's significant previous illnesses, surgeries, injuries, immunizations, and allergies and present state of physical and psychological health. . . All campers should be in compliance with the recommended childhood immunization schedule published annually by the AAP, the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention, and the American Academy of Family Physicians. . . Camps should be aware that individual states may require other immunizations in addition to those recommended by the AAP.[47]

In accordance with this recommendation, camps require parents to submit certain health information instead of just requesting the information. As in the 2000 recommendation, this information is not verified.

2011 Recommendation. The AAP once again adapted their recommendations for camps regarding immunization in this document's 2011 version. In this edition, the AAP recommends:

> Before starting camp, all campers should be in compliance with the recommended childhood immunization schedule published annually by the American Academy of Pediatrics (AAP), the Advisory Committee on Immunization Practices of the Centers for

[46] Committee on School Health, "Health Appraisal Guidelines," 643-644.

[47] Committee on School Health, "Health Appraisal Guidelines for Day Camps ad Resident Camps," *Pediatrics* 115, no. 6 (2005): 1770-1771.

> Disease Control and Prevention, and the American Academy of Family Physicians. Camp administrators should be aware that individual states might require other immunizations in addition to those recommended by the AAP. Polices must also be in place regarding participation in the camp program by campers who are incompletely immunized or unimmunized. People who travel internationally as part of a camp program should consult the Centers for Disease Control and Prevention traveler's health Web site or visit a traveler's clinic for information regarding particular immunization requirements or health concerns that may be associated with their destination.[48]

The most significant addition in this edition of the AAP's guidelines is the statement on incompletely vaccinated campers. As it notes, policies must be placed to protect these campers. As with the 2000 and 2005 guidelines, the 2011 edition does not speak into verification of program participant immunization status.

2019 Recommendation. The 2019 guidelines for a healthy camp from the AAP give by far the most strict recommendations for camps. In this document, the most significant change regarding immunization policy suggestions is nonmedical exemptions to vaccines are deemed "inappropriate."[49] While this document does not specify a best practice regarding the verification of these immunizations, it is clear all campers should be fully vaccinated unless preexisting medical conditions prevent them from doing so.

Current ACA Practice

As of 2019, the ACA did not require campers to be fully vaccinated. An immunization history is required, or a waiver for nonvaccinated campers. To protect these campers, the ACA notes:

---

[48] Council on School Health, "Policy Statement – Creating Healthy Camp Experiences," *Pediatrics* 127 (2011): 795.

[49] Michael J. Ambrose and Edward A. Walton, "Improving Health and Safety," 3.

> If someone not protected through immunization comes in contact with an infected person, many public health departments have initiated mandatory 21 day quarantine. Each public health department may handle this differently. For example, where the quarantine occurs (camp or elsewhere), who is quarantined including potential distinctions between people who have a medically documented reason for not being immunized (e.g. immune-compromised) versus those whose parents chose not to immunize, etc.[50]

To protect these unvaccinated students, the ACA provides forms with appropriate language that camps may employ. They also suggest camps "consult with legal counsel regarding the applicability of the school immunization laws to their business."[51] The ACA's suggestion for the content of this form is included in Appendix A.

Literature Review Conclusion

Stemming from the motivations discussed in this literature review and the potential merits of both sides, these researchers conducted a study to find what percent of camps in the CCCA practice immunization verification. Because of the safety benefits for program participants immunization verification provides both campers and staff, the researchers hypothesized the majority of CCCA affiliated camps would verify immunizations. This study and its findings are discussed in the following sections.

Method

Subjects

The camps surveyed in this study were members of the CCCA that operated year-round. They had to host over five-hundred program participants, including campers and staff, throughout the year. The individual who responded to the survey on behalf of the camp had to

[50] American Camp Association, "Measles Update."

[51] American Camp Association, "Emerging Issues."

work full-time and be over eighteen years of age. This individual needed to have access to the camp's current policy regarding immunization verification if such a policy existed. This study was not researching human subjects, so Institutional Review Board (IRB) approval was not needed (Appendix B).

Apparatus

To collect the desired information from these participants, the researchers used a seven-question survey. The questions were multiple choice with no open-ended options to protect the anonymity of the organization. The first question was a screening question, preventing participants who did not meet the criteria or had not read the consent form from taking the survey. The second question asked, based on Figure 2, in which region the camp is located. The options given for the participants to select included: West, Midwest, South, Northeast, and Does not apply (for international camps). The researchers asked this question to determine if there is a significant difference in policy and practice based on the camp's location. The third question on the survey asked, "Over the past five years, how many participants has your camp averaged annually?" The possible answers were 500-4,999; 5,000-9,999; and 10,000+. The researchers asked this question to determine if there is a significant difference in policy and practice based on the camp's size. The fourth question on the survey asked if the camp represented required campers to provide proof of immunization. The two options for answers were "yes" and "no." This question was used to determine the current practice of the camp. The fifth question on the survey asked for which vaccinations the camp requires proof of immunization. The options listed were the vaccines required by many and all public schools in the United States – DTaP, IPV, Measles and Rubella (MR), Varicella, Mumps, Hep B, Hep A, Flu, Hib, Meningitis,

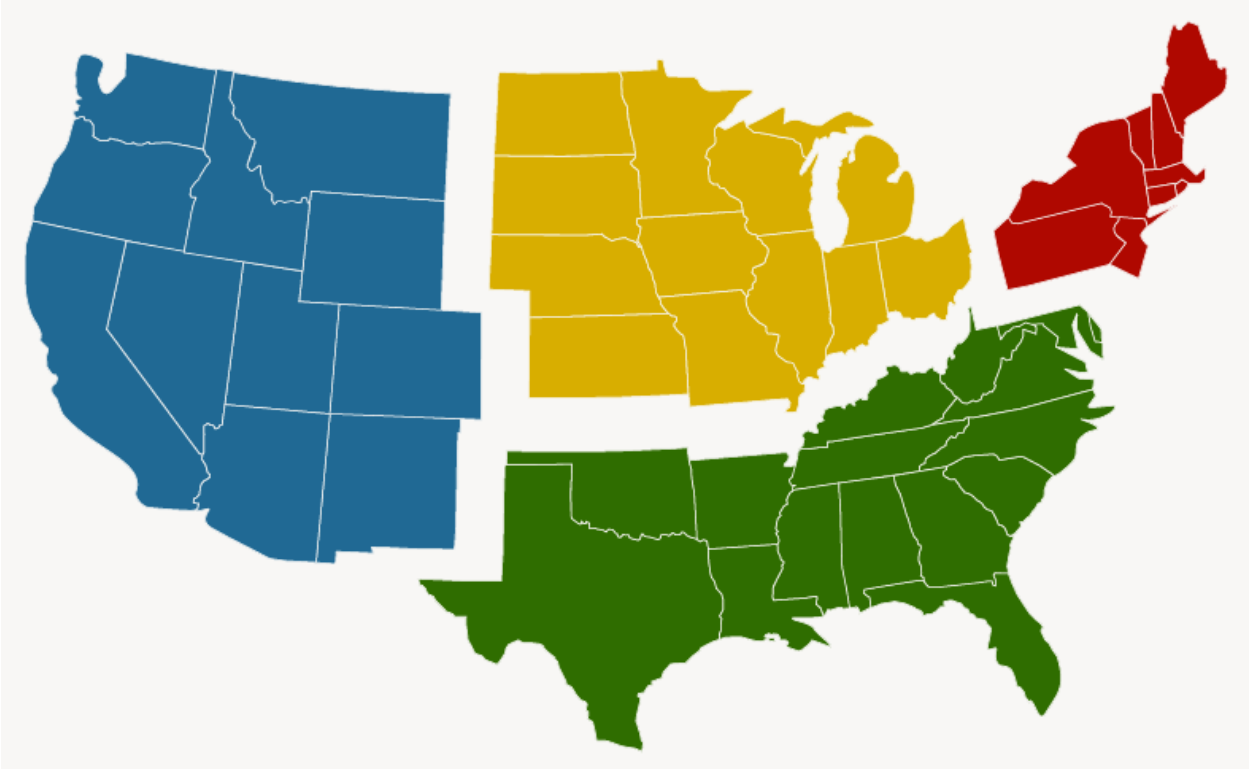

Figure 2. Office of Inspector General, "Child Care Providers: Compliance with State Health and Safety Requirements," U.S. Department of Health & Human Services, accessed February 8, 2021: https://oig.hhs.gov/oas/child-care/

Pneumococcal Vaccinations – and "Unknown." The researchers asked this question to determine the current practice of the camp. Four vaccines – DTaP, IPV, Measles and Rubella, and Varicella – were marked with an asterisk (*) to indicate they are required by schools in all fifty states and Washington, DC. Participants could select as many options as desired. The next question asked how long the camp required proof of vaccination. The options included "Less than 1 year," "1-5 years," "6-10 years," and "Unknown." The researchers asked this question to determine how long the camp has practiced its current policy. Lastly, the survey asked why the camp holds its current position on immunization verification. The options were "Camper safety," "Staff safety," "Religious reasons," "We have never considered it," and "Unknown." The participant could select as many answers as desired. The researchers asked this question to determine the reasons behind the camp's current practice.

Procedures

The survey was distributed via email to 778 CCCA affiliated camps. To gather the email addresses used, the researchers used the CCCA's list of camps, went to each camp's website, and found the camp's email address within their website. When this process took place, there were 842 CCCA affiliated camps. Sixty-four camps did not have publicly accessible emails or did not have up-to-date email information listed on their websites. Of the 778 camps the survey was sent to, 106 responded. Of these respondents, four selected "Disagree" on the screening question and were not able to complete the rest of the survey.

Results

Introduction

The results of the survey gave a fascinating range of answers. Of the 102 camps surveyed, thirty-one (30.4%) verified camper immunizations. Seventy-one camps (69.6%) did not verify camper immunizations. Of the camps 101 camps that answered the question of location, eighteen (17.8%) were located in the West region, thirty-seven (36.6%) in the Midwest region, twenty-nine (28.7%) in the South, and seventeen (16.8%) in the Northeast region. No camps surveyed for this research were from outside the United States. Of the ninety-nine camps that answered the question of size, sixty-eight (68.7%) hosted between 500-4,999 program participants annually. Fifteen camps (15.2%) hosted from 5,000-9,999 program participants per year, and sixteen (16.2%) hosted over 10,000 program participants annually.

Of the thirty-one camps that verified immunizations, four (12.9%) have held their policy for 1-5 years. Two camps (6.5%) have verified immunizations for 6-10 years, sixteen camps

(51.6%) have for more than ten years, and nine (29%) did not know how long they have verified immunizations. All the camps surveyed were asked why they held their position on immunization verification. Thirty-nine camps (39.6%) answered "Camper safety," twenty-six (25.7%) answered "Staff safety," and six (5.9%) selected "Religious reasons." Thirty-four (33.7%) camps said they have never considered immunization verification. Thirty camps (29.7%) did not know why they held their current position on immunization verification.

Twenty-six of the thirty-one camps which verify immunizations (83.9%) require proof of the DTaP vaccine. Nineteen camps (61.3%) require proof of the IPV vaccine. Twenty-one (67.7%) require verification of vaccination against MR. Eighteen camps (58.1%) require verification of the Varicella (Chicken Pox) vaccine. Eleven camps (35.5%) verify that campers are vaccinated against Mumps; eight (25.8%) verify the Hep B vaccination; five (16.1%) verify the Hep A vaccine; two (6.5%) verify the Flu vaccination; four (12.9%) verify the Hib vaccine; eight (25.8%) verify the Meningitis vaccine; and five (16.1%) verify the Pneumococcal Vaccinations. Four camps (12.9%) selected "Unknown."

Based on Size of Camp

Overall

The immunization verification practice of the camps varied significantly based on camp size. For camps with 9,999 or fewer annual participants, approximately one-third verified immunizations (twenty-one out of sixty-eight camps with 500-4,999 participants and five out of fifteen camps with 5,000-9,999 participants). However, for camps with 10,000 or more annual program participants, less than a quarter verified immunizations. This ratio is illustrated in Figure 3.

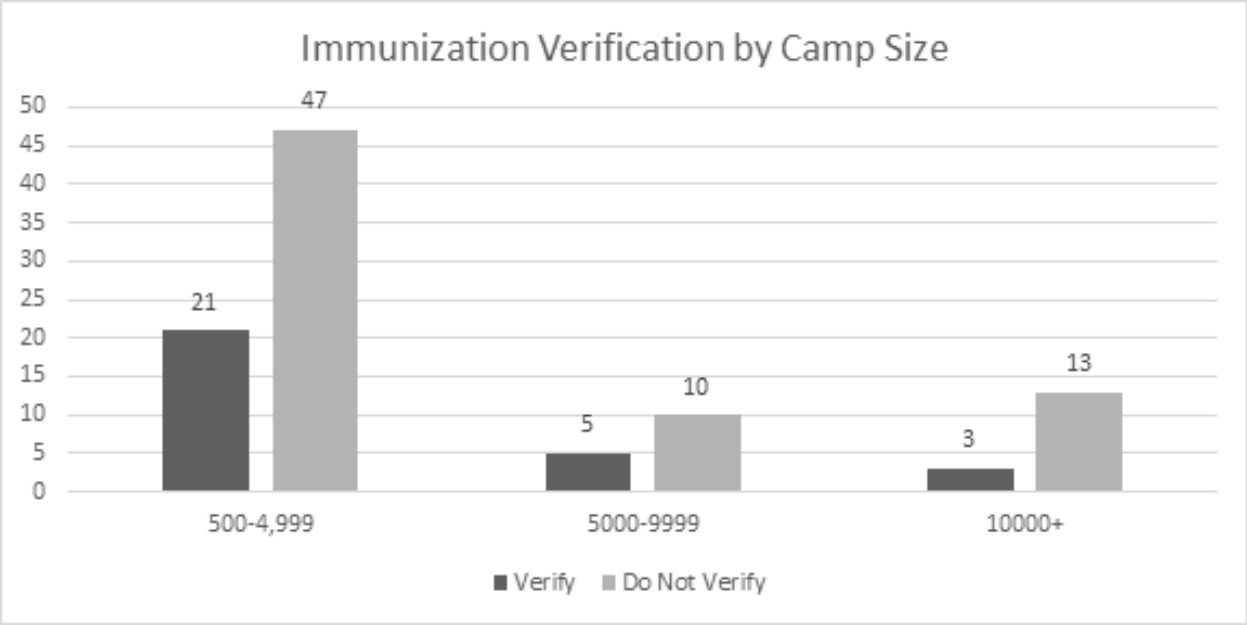

Figure 3. Immunization Verification by Camp Size. Unless otherwise noted, subsequent figures are the researchers' originals.

Immunizations Verified

The immunizations verified varied based on the size of the camp. Camps in all size ranges verified the DTaP, IPV, MR, Varicella, Mumps, and Hep B vaccines. However, no camps in the medium-size category (5,000-9,999 annual program participants) verified the Hep A, Flu, Hib, Meningitis, or PCV immunizations. Both large and small camps verified these vaccines but in mixed proportions. Figure 4 illustrates the percentage of camps, based on size, that verifies specific vaccines.

Length of Time

The length of time camps has verified immunizations also varies based on the size of the camp. All the camps that hosted over 10,000 people annually, which verify immunizations, have done so for over ten years. Sixty percent of medium-size camps have verified for over ten years;

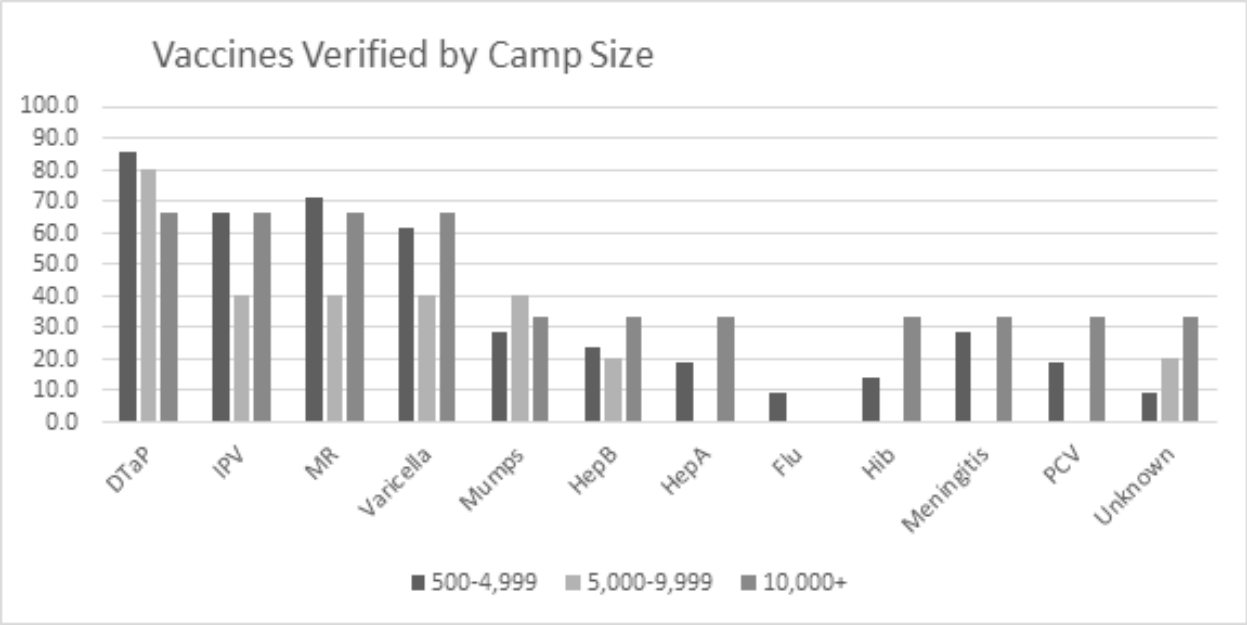

Figure 4: Vaccines Verified by Camp Size.

twenty percent for 6-10 years; twenty percent did not know how long they have verified immunizations. For small camps, 38% had verified for 6-10 years. Five percent have verified for 6-10 years; twenty-four percent have verified for 1-5 years, and 38% did not know how long they have verified immunizations. This data is represented in Figure 5.

Motivations for Verification

The reasons camps do verify immunizations are similar regardless of the size of the camp. All large and medium camps which check vaccinations verify program participant immunizations for camper safety, as do 80% of small camps. Staff safety was also a significant motivation for these camps: 100% of large camps verify immunizations for staff safety, 80% of medium camps do, and just under 60% of small camps do. No camp indicated they verified

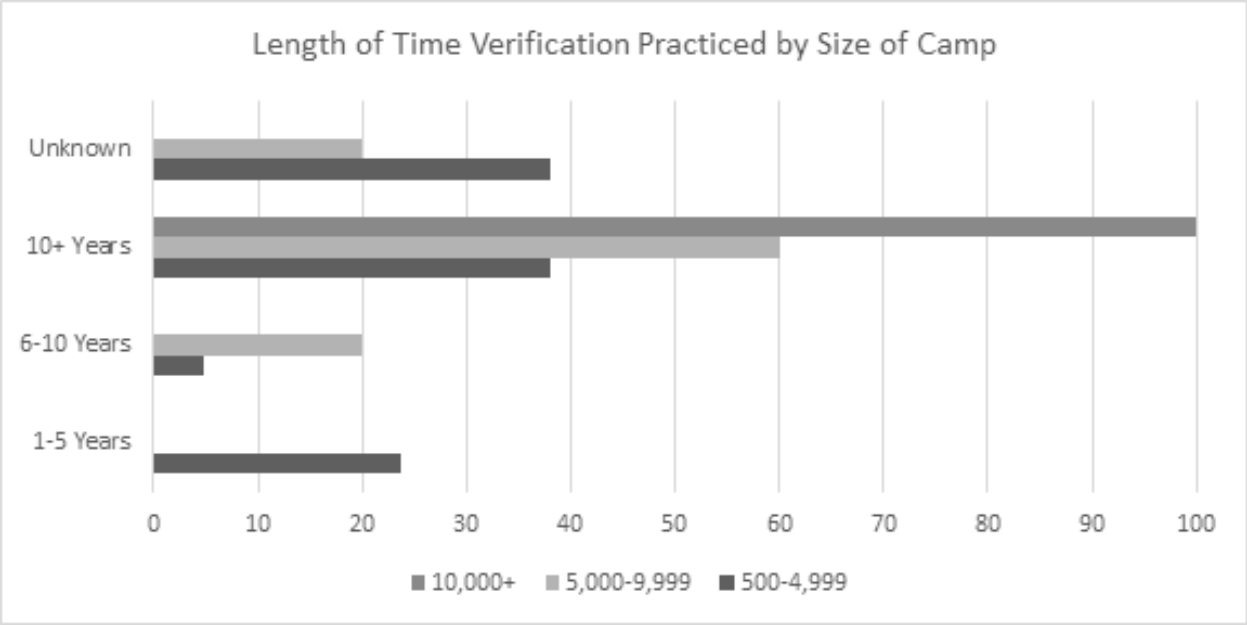

Figure 5. Length of Time Verification Practiced by Size of Camp.

program participants' vaccinations for religious reasons. Just under 20% of small camps did not know why they verified immunizations. These statistics are illustrated in Figure 6.

Based on the Location of Camp

Overall

The practices of camps regarding immunization verification varied based on the location of the camp. In the Midwest, twelve out of thirty-seven camps verified immunizations. The Northeast was the only region in which more camps verified than did not: nine did, eight did not. In the South, only four of twenty-nine camps verified immunizations. Finally, in the West, six out of eighteen camps verified program participant immunizations. These ratios are illustrated in Figure 7.

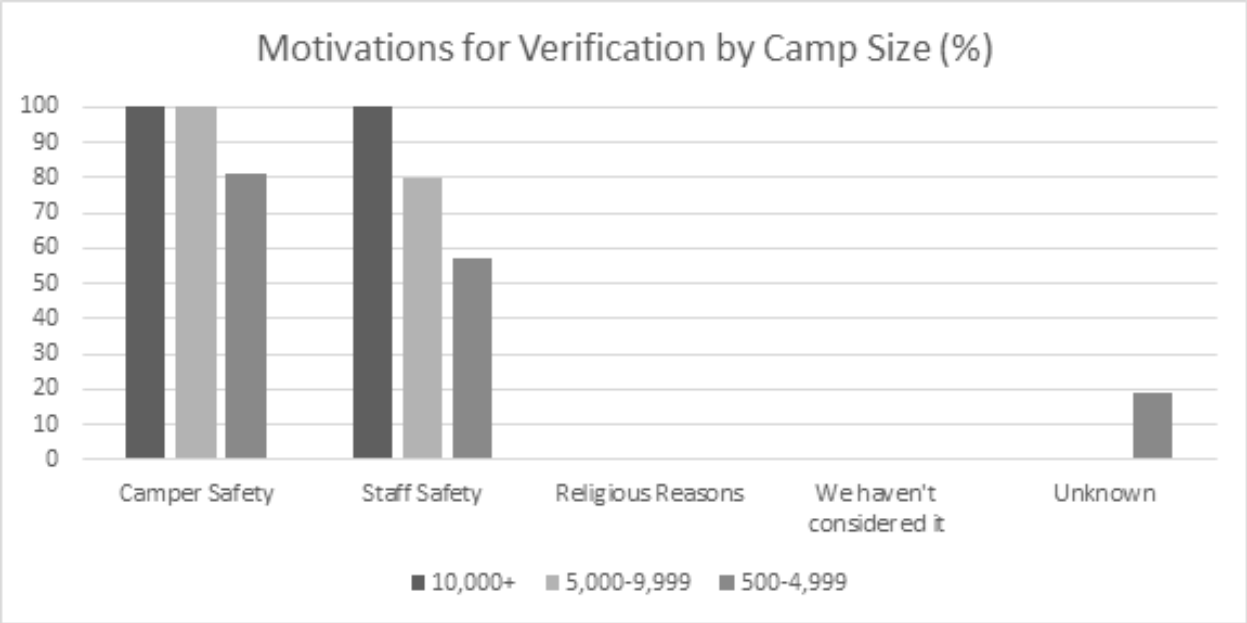

Figure 6. Motivations for Verification by Camp Size.

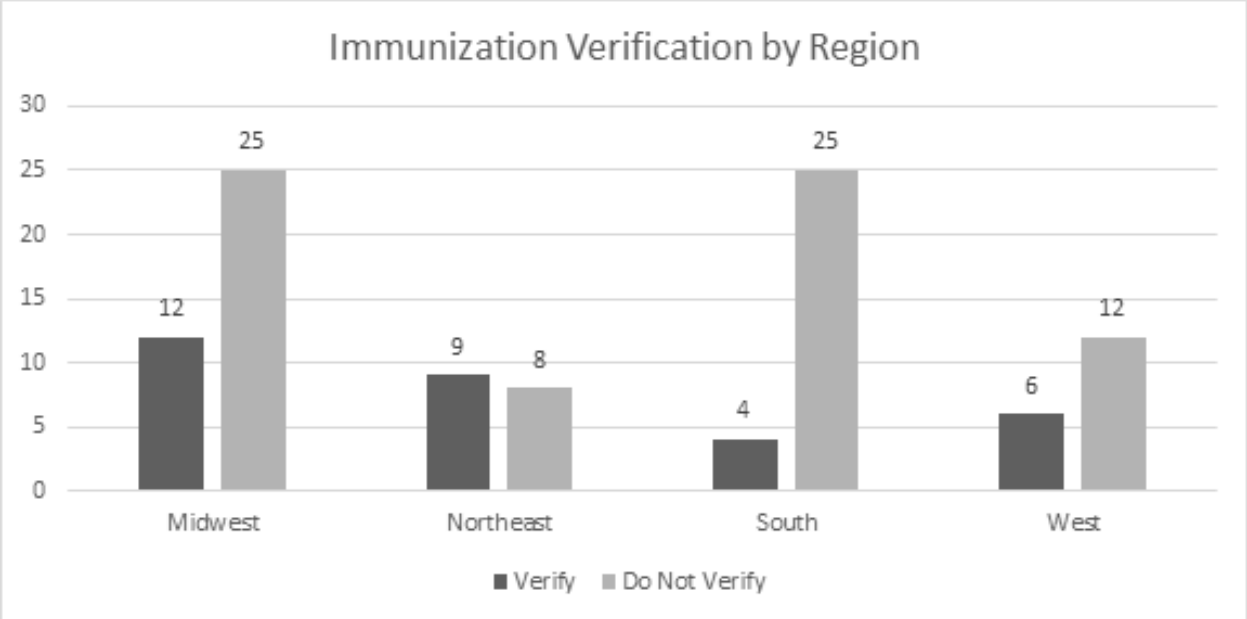

Figure 7. Immunization Verification by Region.

Immunizations Verified

The vaccines verified by region were relatively similar. Camps in all regions verified the DTaP, IPV, MR, Varicella, Mumps, Hep B, Hep A, and Meningitis vaccines. Only camps in the Midwest and South verified the Flu and Hib immunizations. PCV is verified in the Midwest, Northeast, and South. Camps in all four regions selected "Unknown." The percentage of camps that verified each immunization varied by region. These percentages are shown in Figure 8.

Length of Time

The length of time camps in the four regions have verified immunizations varies significantly. The highest percentage of camps in the Midwest have verified for more than ten years, respectively followed by the West, Northeast, and finally the South. Only camps in the South – 50% of those which verified immunizations – have done so for 6-10 years. The greatest percentage of camps in the West have verified for 1-5 years, followed by the Northeast and Midwest. No camps in the South have verified immunizations in this time range. Across these four regions, many camps did not know how long they have verified immunizations: 44% of camps in the Northeast, 25% of camps in the South and Midwest, and 17% in the West. This data is illustrated in Figure 9.

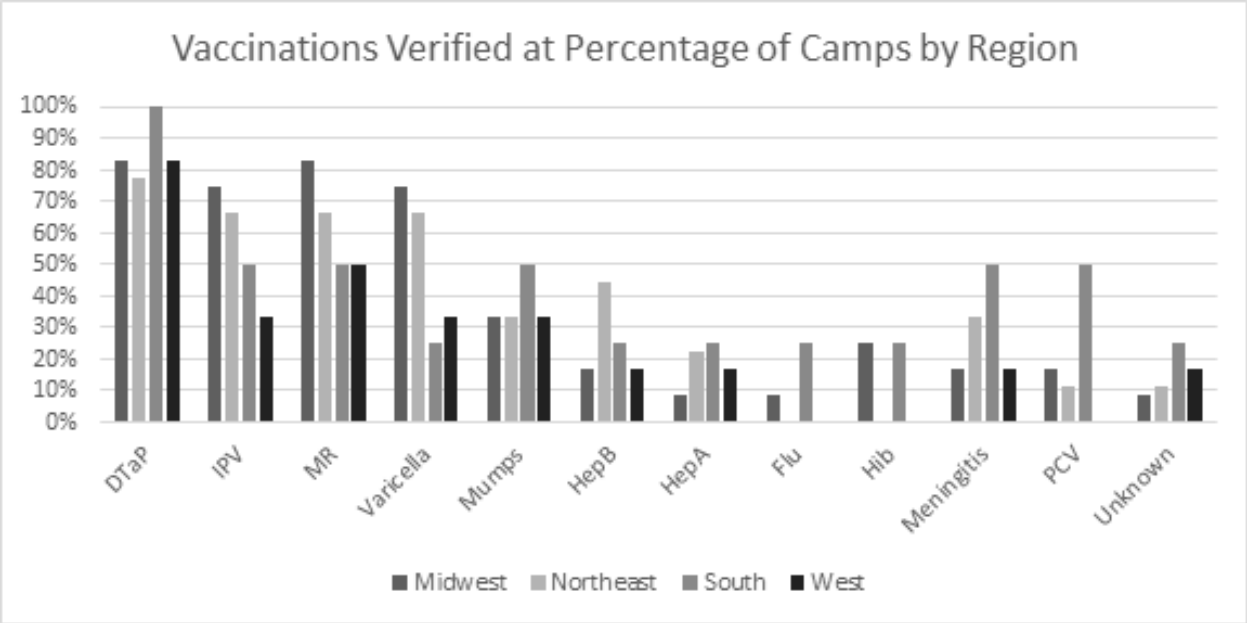

Figure 8. Vaccinations Verified at Percentage of Camps by Region.

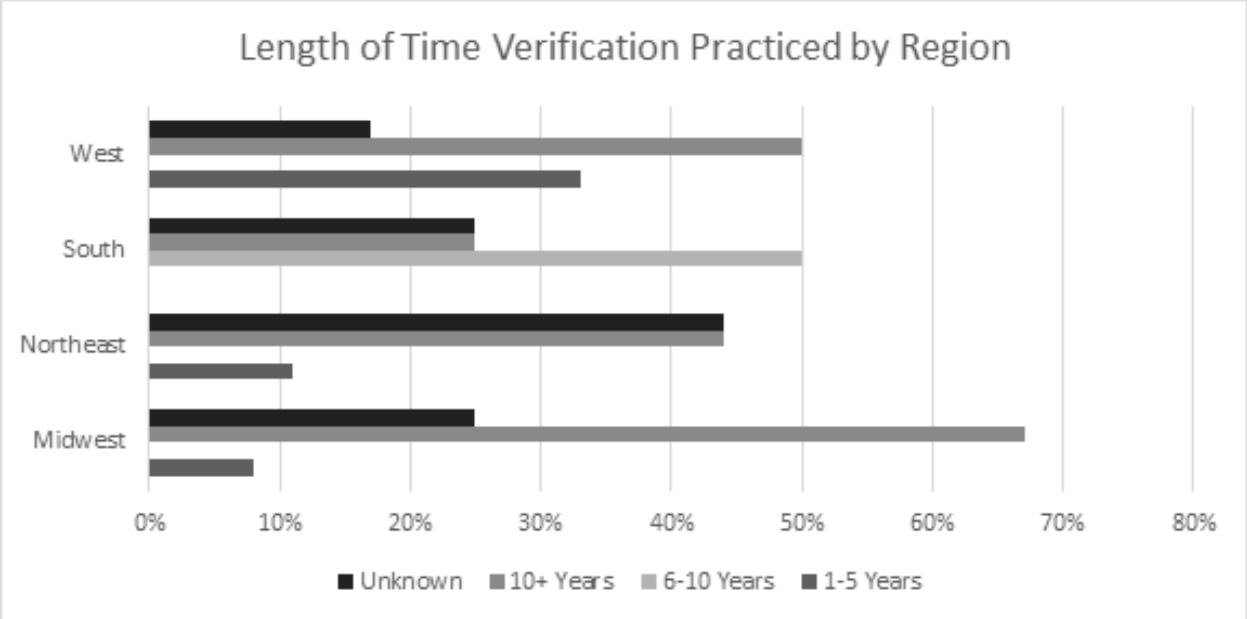

Figure 9. Length of Time Verification Practiced by Region.

Motivations for Verification

Regardless of the location of the camp, their motivations for verification were similar. In the West and South, 100% of camps said they verified immunizations for camper safety. Just over 90% of camps in the Midwest said camper safety was their motivation for immunization verification, as did 67% of camps in the Northeast. Staff safety was also a key motivation for immunization verification across all regions. In the West, over 83% of camps said they verified immunizations for staff safety. In the Midwest, 75% of camps said staff safety was one of their motivations for immunization verification. In the Northeast, 50% of camps cited staff safety as a key motivation for immunization verification, as did 44% of camps in the Northeast. 33% of camps in the Northeast chose "Unknown" on this question, as did 8% of camps in the Midwest. These ratios are demonstrated in Figure 10.

Discussion

Based on the recommendations of medical experts, the researchers have determined a best practice which they suggest for camps. This best practice is that which mitigates the most actual risk and allows the most campers to attend camp safely. This practice would be a form of immunization verification that prioritizes the health of program participants and the operational necessities of the camp. Contrary to the results anticipated by the researchers based on these health guidelines, the majority of CCCA affiliated camps do not verify immunizations in any way.

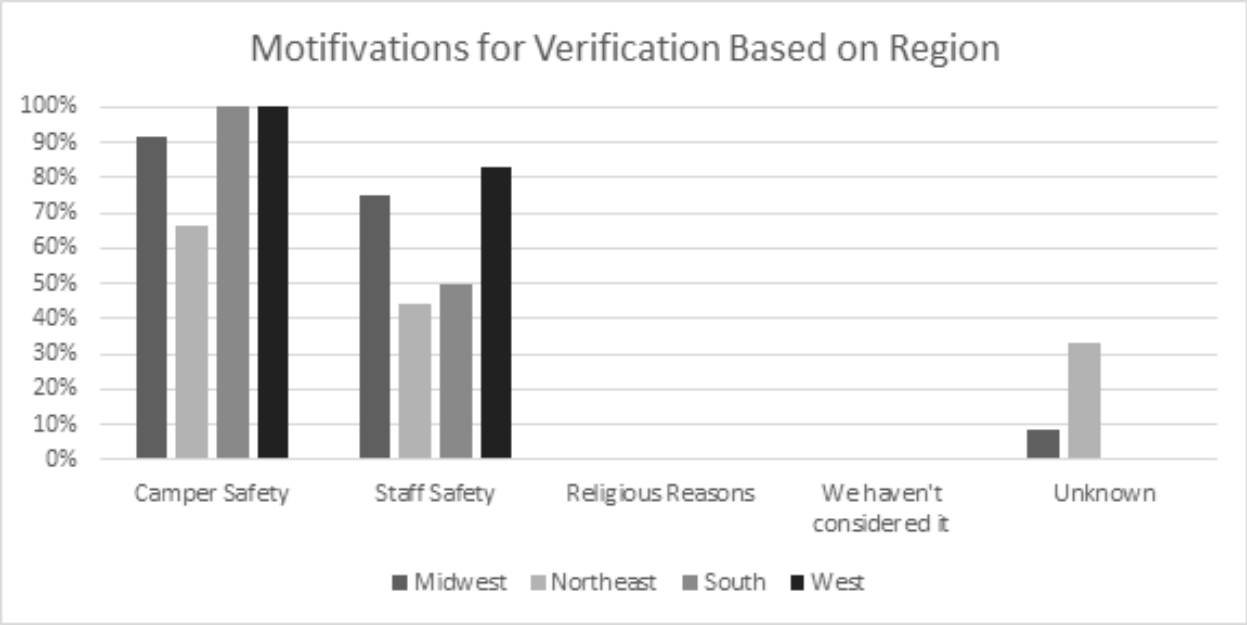

Figure 10. Motivations for Verification Based on Region.

The researchers believe every child is valuable and deserves a camp experience. They want to see as many children at camp as possible. However, they recognize it is the camps' responsibility to the public to handle the safety of campers and staff. Camps are responsible for outbreaks that occur through their programming, such as those mentioned in the above literature review. Furthermore, a disease outbreak at camp can be operationally disastrous. Sick staff cannot work. The camp may become understaffed and unable to operate adequately. Because of the liability of a disease outbreak and the detrimental effect one has on camp operations, the researchers suggest CCCA camps verify program participants' immunizations without exemption.

CCCA camps are religious organizations. The philosophical concerns of these camps and their clients should be respected. Sadly, religious exemptions to vaccines are frequently abused.[52] Even with legitimate religious exemptions, the dangers of disease outbreaks persist. Some campers may not attend camps that follow this practice and require unexempted immunization verification. However, camps should consider it because it increases the safety of the program participants within their care. Not every camp will follow this practice. Opportunities will still exist for those who do not want to verify their immunizations to have a camp experience.

Recognizing the AAP recommends all campers be vaccinated without exception,[53] camps should consider implementing strategies that allow program participants to verify immunizations as painlessly as possible. There are many ways in which this practice may be executed. Some of these methods include forms with attached doctors' notes, verification from schools, or through local immunization registries.[54] These methods are further discussed in Appendix C. Camps are encouraged to consult this appendix and adapt a method for implementation.

Conclusion

Camps hold various positions regarding immunization verification for program participants. Their motivations for and against this practice include religious reasons, camper and staff safety, state mandates, and camp-specific motivations. The majority of CCCA affiliated

[52] Dorit Rubenstien Reiss, "Thou Shalt Not Take the Name of the Lord Thy God in Vain: Use and Abuse of Religious Exemptions from School Immunization Requirements," *Symposium: Children's Health, Mental Health, and the Law* 65 (2014): 1570.

[53] Michael J. Ambrose and Edward A. Walton, "Improving Health and Safety," pg. 3.

[54] Center for Disease Control and Prevention, "Finding and Updating Vaccine Records," CDC, last modified February 25, 2020. https://www.cdc.gov/vaccines/parents/records/find-records.html.

camps do not verify their campers' immunizations. However, a best practice for these camps should be considered for implementation. This practice protects the program participants and allows camps to maximize Gospel impact by remaining open. CCCA camps should consider verifying all camper and staff immunizations without exemption.

Bibliography

Ambrose, Michael J. and Edward A. Walton. “Improving Health and Safety at Camp.” *American Academy of Pediatrics* 144, no. 1 (2019): 1-10. https://pediatrics.aappublications.org/content/144/1/e20191355.

AAP Point-of-Care Solutions, "Immunization Schedules for 2020," AAP (2020): https://redbook.solutions.aap.org/selfserve/ssPage.aspx?SelfServeContentId=Immunization_Schedules

American Academy of Pediatrics. “Immunization Schedules for 2020.” AAP. American of Academy of Pediatrics. Last modified February 3, 2020. https://redbook.solutions.aap.org/selfserve/ssPage.aspx?SelfServeContentId=Immunization_Schedules.

American Camp Association. “ACA Facts and Trends.” ACA Camps. American Camp Association. Accessed December 18, 2020. https://www.acacamps.org/press-room/aca-facts-trends.

———. “Emerging Issues: Immunizations, Measles, and other Communicable Diseases.” ACA. American Camp Association. Published April 2015. https://www.acacamps.org/resource-library/campline/emerging-issues-immunizations-measles-other-communicable-diseases.

———. “Camper Health History Form 1.” ACA Camps. American Camp Association. Last modified January 2014. https://www.acacamps.org/sites/default/files/resource_library/forms/Camper-Health-History-Form.pdf

———. “Measles Update for the 2019 Summer Camp Season.” ACA. American Camp Association. Published May 20, 2019. https://www.acacamps.org/news-publications/blogs/camp-connection/measles-update-2019-summer-camp-season.

———. “Standards-At-A-Glance.” ACA Camps. American Camp Association. Last modified December 2019. https://www.acacamps.org/sites/default/files/page_documents/accreditation/Standards-at-a-glance-2019-updated-Nov19.pdf. Emphasis ours.

———. “The Healthy Camp Study: Impact Report.” ACA Camps. American Camp Association. Accessed December 18, 2020. https://www.acacamps.org/downloads/healthy-camp-study-impact-report.

Centers for Disease Control and Prevention. “Chickenpox (Varicella) Vaccines.” CDC. Last modified September 9, 2020. https://www.cdc.gov/vaccinesafety/vaccines/varicella-vaccine.html.

———. “Contacts for IIS Immunization Records.” CDC. Last modified June 7, 2019. https://www.cdc.gov/vaccines/programs/iis/contacts-locate-records.html#state.

———. “Ensuring the Safety of COVID-19 Vaccines in the United States.” CDC. Last modified December 22, 2020. https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety.html.

———. “Finding and Updating Vaccine Records.” CDC. Last modified February 25, 2020. https://www.cdc.gov/vaccines/parents/records/find-records.html.

———. “Flu Vaccine Safety Information.” CDC. Last modified September 17, 2019. https://www.cdc.gov/flu/prevent/general.htm.

———. “Haemophilus Influenza Type B (Hib) Vaccines.” CDC. Last modified September 9, 2020. https://www.cdc.gov/vaccinesafety/vaccines/hib-vaccine.html.

———. “Hepatitis B Vaccines.” CDC. Last modified September 9, 2020. https://www.cdc.gov/vaccinesafety/vaccines/varicella-vaccine.html.

———. “Measles, Mumps, Rubella (MMR) Vaccine.” CDC. Last modified September 9, 2020. https://www.cdc.gov/vaccines/vpd/polio/public/index.html.

———. “Pneumococcal Vaccination: What Everyone Should Know.” CDC. Last modified August 7, 2020. https://www.cdc.gov/vaccines/vpd/pneumo/public/index.html.

———. “Polio Vaccination: What Everyone Should Know.” CDC. Last modified May 4, 2018. https://www.cdc.gov/vaccines/vpd/polio/public/index.html.

———. “Whooping Cough Vaccines are Safe but Side Effects Can Occur.” CDC. Last modified June 29, 2017. https://www.cdc.gov/pertussis/pregnant/mom/safety-side-effects.html.

Coleman, Marla. “American Camp Association Immunization Recommendations for International Staff.” ACA. American Camp Association. Accessed January 20, 2021. https://www.acacamps.org/resource-library/campline/american-camp-association-immunization-recommendations-international-staff.

Committee on School Health. “Health Appraisal Guidelines for Day Camps and Resident Camps.” *Pediatrics* 105, no. 3 (2000): 643-644.

———. “Health Appraisal Guidelines for Day Camps ad Resident Camps.” *Pediatrics* 115, no. 6 (2005): 1770-1773.

Cox, Chelsey and Miriam Fauzia. “Fact check: COVID-19 vaccine ‘morally acceptable,’ Vatican says, but some claims missing context.” USA Today. USA Today. Published December 29, 2020. https://www.usatoday.com/story/news/factcheck/2020/12/29/fact-check-covid-19-vaccines-morally-acceptable-vatican-says/4014905001/.

Council on School Health. “Policy Statement – Creating Healthy Camp Experiences.” *Pediatrics* 127 (2011): 794-799.

Blaisdell, Laura L., Wendy Cohn, Jeff R. Pavell, Dana S. Rubin, and Jeffrey E. Vergales. “Preventing and Mitigating SARS-CoV-2 Transmission — Four Overnight Camps, Maine, June–August 2020.” *Morbidity and Mortality Weekly Report* 69, no. 35 (2020): 1216-1220. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7470465/.

Gerber, Jeffrey S. and Paul A. Offit. “Vaccines and Autism: A Tale of Shifting Hypotheses.” *Clin Infect Dis.* 48, no. 4 (2009): 456-461. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2908388/.

Lebovits, Hannah. “We sent our kids to summer camp. It shut down with a COVID-19 outbreak after just a few days. This is what school will look like.” Business Insider. businessinsider.com. Published August 5, 2020. https://www.businessinsider.com/covid-broke-out-at-our-kids-camp-this-is-what-school-will-look-like-2020-7.

Massachusetts Department of Public Health. Minimum Standards for Recreational Camps for Children (State Sanitary Code, Chapter IV). 105 CMR 430.000. 1-33.

National Conference of State Legislatures. “States With Religious and Philosophical Exemptions From School Immunization Requirements.” NCSL. National Conference of State Legislatures. Last modified June 26, 2020. https://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx.

Novotny, Thomas, Charles Jennings, Mary Doran, C. Ralph March, Richard S. Hopkins, Steven G.F. Wassilak, and Lauri E. Markowitz. “Measles Outbreaks in Religious Groups Exempt from Immunization Laws.” *Public Health Reports* 103, no. 1 (1988): 49-54. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1477942/.

Office of Inspector General, “Child Care Providers: Compliance with State Health and Safety Requirements,” U.S. Department of Health & Human Services, accessed February 8, 2021: https://oig.hhs.gov/oas/child-care/

Opel, Douglas J., Douglas S. Diekema, and Lainie Friedman Ross. “Should We Mandate a COVID-19 Vaccine for Children?” *Jama Pediatrics* (2020). https://jamanetwork.com/journals/jamapediatrics/article-abstract/2770123.

Pelčić, Gordana, Silvana Karačić, Galina L. Mikirtichan, Olga I. Kubar, Frank J. Leavitt, Michael Cheng-tek Tai, Naoki Morishita et al. “Religious exception for vaccination or religious excuses for avoiding vaccination.” *Croatian Medical Journal* 57, no. 5 (2016): 516-521. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5141457/.

ProCon.org. “State-by-State: Vaccinations Required for Public School Kindergarten.” ProCon.org. ProCon. Last modified August 20, 2020. https://vaccines.procon.org/state-by-state-vaccinations-required-for-public-school-kindergarten/.

Richmond, Dan, Jim Sibthorp, and Cait Wilson. “Understanding the Role of Summer Camps in the Learning Landscape: An Exploratory Sequential Study.” *Journal of Youth Development* 14, no. 3 (2019): 9-30. http://digitalcommons.liberty.edu/eleu/vol2/iss1/5/.

Rubenstien Reiss, Dorit. “Thou Shalt Not Take the Name of the Lord Thy God in Vain: Use and Abuse of Religious Exemptions from School Immunization Requirements.” *Symposium: Children's Health, Mental Health, and the Law* 65 (2014): 1551-1601.

Schaffzin, Joshua K., Lynn Pollock, Cynthia Schulte, Kyle Henry, Gustavo Dayan, Debra Blog, and Perry Smith. “Effectiveness of Previous Mumps Vaccination during a Summer Camp Outbreak.” *Pediatrics* 120, no 4. (2007): e862-e868. www.pediatrics.org/cgi/doi/10.1542/peds.2006-3451

Tsalik, Ephraim L., Edward F. Hendershot, Devdutta G. Sangvai, Hannah M. Cunningham, Coleen K. Cunningham, Maria G. Lopez-Marti, William K. Purdy, Christopher W. Woods, L. Brett Caram. "Clinical presentation and response to treatment of novel influenza A H1N1 in a university-based summer camp population." *Journal of Clinical Virology* 47. (2010): 286-288.

Wakefield, Andrew J. "MMR vaccination and autism." *The Lancet* 354, no. 9182 (1999): 949-950. https://www.thelancet.com/journals/lancet/article/PIIS0140673605756968/fulltext.

Appendix A

ACA's Mandatory Accreditation Standard

The ACA addresses immunization in their accreditation standard, in the portion on health and wellness. They require the following for accreditation:

> ACA's mandatory accreditation standard HW-5 addresses the issue of immunization:
>
> HW 5.1: Does the camp require each camper to submit a current, signed health history that includes all of the following information in relation to the activities in which the camper may participate?
>
> A. Description of any camp activities from which the camper should be exempted for health reasons;
>
> B. Record of past medical treatment, if any;
>
> C. Record of allergies and/or dietary restrictions;
>
> D. A statement from the custodial parent/guardian attesting that all immunizations required for school are up to date and including the actual date (month/year) of last tetanus shot;
>
> E. Record of current medications, both prescribed and over-the-counter; and
>
> F. Description of any current physical, mental, or psychological conditional requiring medication, treatment, or special restrictions or considerations while at camp?
>
> Furthermore, the "Contextual Education" for HW-5 further explains that:
>
> "If camps have minors who do not have immunizations, for religious or other reasons, a "record" can be a signed refusal or a signed waiver form."
>
> Camps should consult with legal counsel regarding the applicability of the school immunization laws to their business. Camps that include un-vaccinated individuals should require a signed exemption form. The form might include language such as:
>
> "Because our camp program has a potential for communicable diseases, we recommend that program participants are appropriately immunized for, at minimum, the following diseases: tetanus, mumps, measles, rubella, polio, pertussis (whooping cough), and diphtheria. This being said, we recognize that some individuals may not be fully immunized for reasons that are biophysical (e.g., the individual is allergic to a serum

component) or of personal choice (e.g., faith belief). This form is intended to capture information about individuals who are not fully immunized."[55]

[55] American Camp Association, "Emerging Issues."

Appendix B

IRB Communication

The IRB sent the following email describing their approval for this research:

> June 11, 2020
>
> Katherine Stacey
> Philip McClendon, Keith Oglesby, Jonathan Geukgeuzian
>
> Re: IRB Application - IRB-FY19-20-376 Extent of Immunization Requirement and Verification at Camps
>
> Dear Katherine Stacey, Philip McClendon, Keith Oglesby, Jonathan Geukgeuzian:
>
> The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your IRB application.
>
> Decision: No Human Subjects Research
>
> Explanation: Your study does not classify as human subjects research because it will not involve the collection of identifiable, private information.
>
> Please note that this decision only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.
>
> If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.
>
> Sincerely,
>
> **G. Michele Baker, MA, CIP**
> *Administrative Chair of Institutional Research*
> **Research Ethics Office**[56]

[56] G. Michele Baker, e-mail message to researcher, June 11, 2020.

Appendix C

Methods of Immunization Verification

Methods for immunization verification are listed in Figure 11. Support for these methods can be found in the footnotes below.[57, 58, 59]

[57] American Camp Association, "Camper Health History Form 1," ACA Camps, American Camp Association, last modified January 2014. https://www.acacamps.org/sites/default/files/resource_library/forms/Camper-Health-History-Form.pdf

[58] Center for Disease Control and Prevention, "Finding and Updating Vaccine Records."

[59] Centers for Disease Control and Prevention, "Contacts for IIS Immunization Records," CDC, last modified June 7, 2019. https://www.cdc.gov/vaccines/programs/iis/contacts-locate-records.html#state.

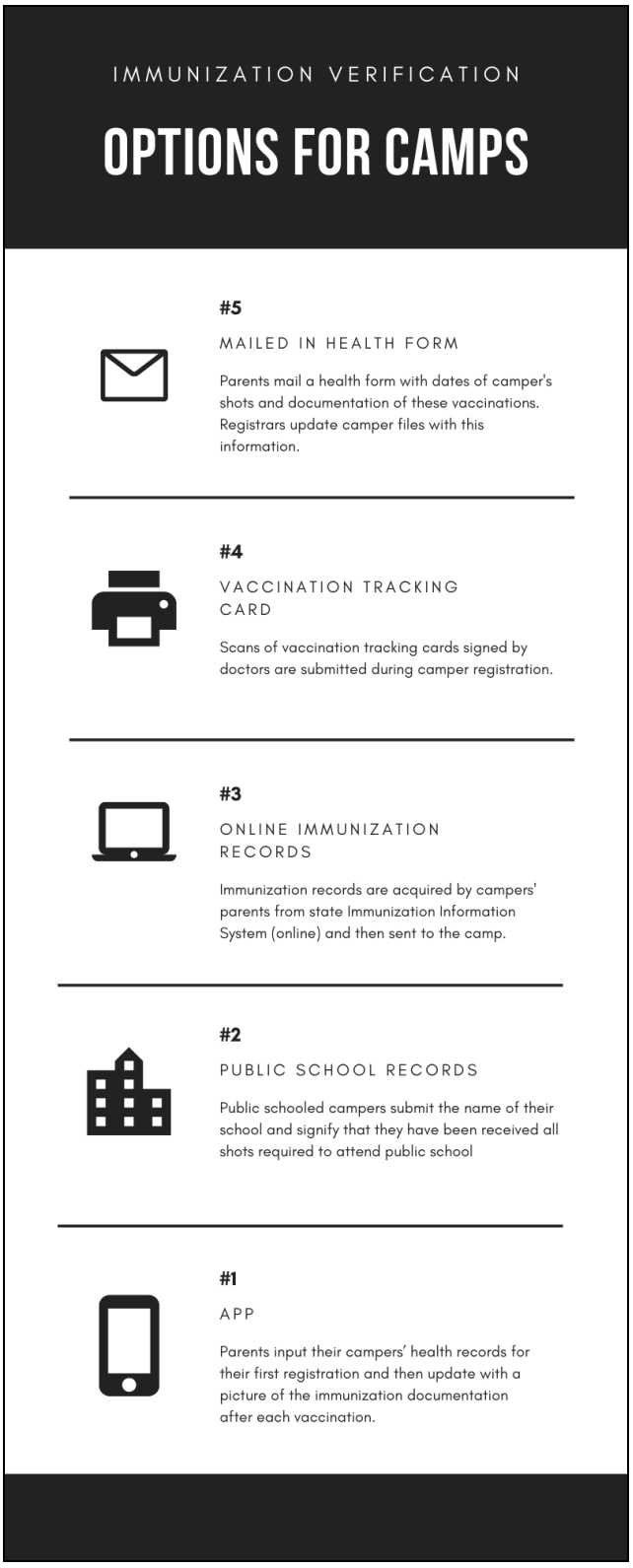

Figure 11: Methods for Immunization Verification Infographic