Extension Horses, Inc. experts act fast to create online resources to assist the horse industry during COVID-19

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ABSTRACT: The COVID-19 pandemic and resulting stay-at-home directives, adopted out of necessity to protect human health, introduced significant challenges for horse owners and small equine businesses. Restricted access, and in many cases closure of barns, resulted in a multitude of questions and concerns within the equine community which needed to be addressed rapidly. Extension Horses, Inc. (EH) coordinated the development and delivery of a variety of educational resources utilizing a combination of online formats and dissemination through social media and EH member contact lists. A series of infographics, webinars, and podcasts (three in each category) were created to provide guidance on essential care of horses, emergency preparedness, financial assistance, legal concerns, and biosecurity during the crucial, initial weeks of the pandemic (March to April 2020). Web conferencing technology (Zoom) was used to facilitate discussion and task delegation among EH members and to conduct and record webinars and podcasts. Podcasts were hosted on Buzzsprout and infographics were created using Adobe InDesign. Live webinar participants were invited to participate in several polls during the webinar and were sent a brief survey to complete at the end of the webinar series. Analytics for all educational resources combined demonstrated a 32-d total direct reach of 135,563. Most live webinar participants identified themselves as horse owners and small equine business owners (55%). The majority of live webinar participants indicated the information was useful (99%), and they would utilize the resources they had learned about (80%). Survey respondents reported that Facebook, email, and word of mouth were key ways in which they learned about the webinars. The same survey found that the web-platform was an effective method to receive information (85% high satisfaction) and respondents were highly likely to recommend future EH webinars to others (88%). The three infographics had a total Facebook reach of 131,765, the webinars had 3,522 total views, and the three podcasts had 276 total downloads. The rapid response of EH and quick turnaround of products allowed a large online audience to receive vital information for coping with COVID-19. Having the established EH network, already familiar with virtual education, was a big asset in this effort. This can serve as a model for cooperative extension to utilize in future collaborative responses to industry issues.

Key words: cooperative extension, COVID-19, emergency response, horse industry, online resources, social media

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INTRODUCTION

In the beginning of 2020, the United States (and the rest of the world) were hurled into an unprecedented situation with the arrival of a novel coronavirus called SARS-CoV-2. This virus has the potential to infect many people with illness (specifically called COVID-19), causing serious health consequences. This led to many states closing all nonessential businesses during March 2020. These closures and the potential risk to human health have had significant impacts on the equine industry. Two audiences strongly impacted were horse owners/enthusiasts and equine businesses such as riding, boarding, and training stables. Government stay-at-home decrees meant businesses had an immediate and drastic loss in income, but small agricultural enterprises largely slipped through the cracks in state and federal government assistance programs. Furthermore, those still performing essential work in the equine industry had concerns about the proper biosecurity and social distancing protocols to implement on horse farms and in businesses. With many horse owners and equine businesses unsure where to turn, Extension Horses, Inc. (EH) acted quickly to develop online content, programs, and resources to help horse industry members navigate through the COVID-19 crisis.

Extension Horses, Inc. is composed of equine experts from the academic and industry fields located throughout the United States. This eXtension (pronounced e-Extension) Community of Practice (formerly known as HorseQuest) began in 2004 with the mission of providing science-based information and learning opportunities to the equine industry. Many of the current core leaders of this group have been active since the inception of eXtension, and “HorseQuest” was the first Community of Practice to “go live” to the public (Greene et al., 2010). With a long-standing history of collaborating on all types of extension educational materials, publications, grants, and programming, this nationally recognized group (2010 USDA National Institute of Food and Agriculture Partnership Award) was able to act fast at a critical time in history.

The objectives were to 1) identify common and critical COVID-19-related needs across the national equine industry, 2) construct an immediate response plan to disseminate credible information pertaining to the equine community, 3) deliver the new programming and resources using various media platforms, and 4) evaluate the effectiveness of the programming. The group decided on a coordinated effort to create and share infographics, webinars, and podcasts addressing COVID-19-related issues pertinent to equine clientele across the nation.

MATERIALS AND METHODS

COVID-19 Content

As the pandemic escalated, EH members met virtually to craft a response plan to address the questions members were receiving at the local and state level. The key audiences were identified as individual horse owners and small business owners. Three content delivery formats were chosen to provide varying types and levels of engagement utilizing different platforms (Table 1). This allowed each target audience to choose the format and depth of information that would best meet their needs.

Infographics—The three infographics were assembled to compile key pieces of information on essential care of equine animals and emergency preparedness plans into visual, quick reference guides for education on safeguarding human and horse health. The team engaged an undergraduate student to create the visuals using Adobe InDesign. Drafts were reviewed by team members and revisions incorporated before publishing (Morrison et al., 2020a, 2020b, 2020c).

Webinars—Three webinars provided more in-depth content on financial, legal, and horse and human welfare issues facing small business owners. Previous research by EH has found that webinars are an effective way to engage horse business owners and enthusiasts (Pulec et al., 2016). Teams of EH members recruited experts to present each topic area. At least one EH member moderated each live Zoom presentation, and several other...
EH members facilitated questions from the audience throughout the webinar. Webinar recordings were posted on the Extension Horses YouTube channel (youtube.com/user/eXHorses) for delayed viewing (Bump et al., 2020; Ivey et al., 2020; Kenny et al., 2020). During the live webinar sessions, polls were used to ask participants about information pertaining to who they represent in the equine industry, how COVID-19 was impacting them, and if they would apply information from the webinars to their situation (Table 2). After the final webinar on boarding contracts was presented on April 23, 2020 (15 d following the initial webinar on financial assistance), participants from all three webinars were invited via email to complete a Qualtrics survey. This survey consisted of a range of questions that included asking participants how they heard about the webinars, the usefulness of the topics and speakers, and basic demographic data. Since data collected in the webinar polls and Table 1.

| Webinars                                                                 | Release date | Live views/delayed views | Total views |
|-------------------------------------------------------------------------|--------------|--------------------------|-------------|
| COVID-19 Financial Assistance Options for Horse Owners and Horse Businesses | April 8, 2020 | 387/2,062 | 2,449 |
| Horse Biosecurity and Facility Sanitation                               | April 15, 2020 | 150/595 | 745 |
| Fine Tuning Equine Boarding Contracts                                   | April 23, 2020 | 128/200 | 328 |

Table 1. Extension Horses, Inc. co-branded and promoted educational efforts (from 3/31/20 to 5/1/20)

| Infographics                                                                 | Release date (posted on Facebook) | Post engagements | Total post reach |
|----------------------------------------------------------------------------|----------------------------------|------------------|-----------------|
| Defining Essential Equine Care During a Pandemic                          | March 31, 2020                   | 13,265           | 98,472          |
| FAQs on Essential Equine Activities During a Pandemic                      | April 1, 2020                    | 3,023            | 22,762          |
| Developing a Personal Preparedness Plan                                   | April 2, 2020                    | 849              | 10,531          |

32-d total direct reach 135,563

“Total views reported on the Extension Horses YouTube channel on May 1 [https://www.youtube.com/channel/UC8aMTB4oIaOJOnZ-hy2hbA]

*aReported by Facebook Insights on May 1 for the ExtensionHorses.org Facebook Page [https://www.facebook.com/ExtensionHorses/]. Engagements include post clicks, reactions, comments, and shares. Reach is organic (not paid) reach.

‘Total downloads as reported by Buzzsprout [https://www.buzzsprout.com/242373]

Table 2. Webinar poll responsesa

| Webinar topic                                                                 | Finances | Biosecurity | Contracts | Totals/percentages |
|------------------------------------------------------------------------------|----------|-------------|-----------|--------------------|
| Horse Owner                                                                  | 129      | 12          | 23        | 27%                |
| Small Business Owner                                                         | 134      | 9           | 35        | 29%                |
| Equine Non-profit                                                            | 42       | 9           | 2         | 9%                 |
| Equine Industry Employee                                                     | 21       | 18          | 6         | 7%                 |
| Self-Employed                                                                | 83       | 1           | 2         | 14%                |
| Independent Contractor                                                       | 15       | 1           | 2         | 3%                 |
| Education/Other Agencies                                                     | 36       | 27          | 9         | 12%                |
| Total responses                                                              | 460      | 77          | 79        | 616                |

Q: What sector of the industry are you representing today? (could choose more than one)

Yes: 130 77 70 99%
No: 3 0 1 2%
Total responses: 133 77 71 281

Q: Will you use any of the resources you learned about today?

Yes: 105 60 60 80%
No: 1 0 0 0.4%
Unsure: 27 17 11 19%
Total responses: 138 77 71 281

aLive webinar participants were invited to complete several polls during the webinars.

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Qualtrics surveys were used for program evaluation and future program planning, the University of Arizona Institutional Review Board (IRB) does not consider this to be human research, and thus did not require an IRB protocol.

Podcasts—The podcast format allows a more conversational approach to education. Extension Horses, Inc. used their existing “Tack Box Talk” podcast series (Hiney, 2019), and added three episodes to address COVID-19 specific topics. For each podcast episode, an EH member recruited industry professionals to address each topic (Brady and Hiney, 2020; Greene and Hiney, 2020a, 2020b). All podcasts were recorded in Zoom and are hosted on Buzzsprout.

**Dissemination**

The EH group implemented a purposeful plan to deliver content related to COVID-19 to the intended audiences utilizing existing EH media platforms. The ExtensionHorses.org Facebook page (13,140 followers) was used to post infographics and promote content that was hosted on the ExtensionHorses YouTube channel (15,000 subscribers), the Tack Box Talk podcast, and the ExtensionHorses.org website. This information was further disseminated at the state and local level on EH members’ Cooperative Extension social media accounts. Additionally, the information was shared through email/listservs/newsletters, contacts with veterinarians and agriculture leaders, and industry groups within each EH member’s home state.

The EH group gained greater reach using social media best practices. For example, EH created graphics for the posts which advertised webinars and podcasts (posts with pictures achieve greater organic reach (Peruta and Shields, 2018)). The EH members “shared” Facebook posts to additional social media accounts rather than reposting content directly. Using this method, EH members share the original post. Using this method, EH members have the potential to directly reach an estimated audience of 50,000 horse enthusiasts. The audience size has the potential to increase exponentially when the people who interact with the content share and forward the content to their own contacts.

**RESULTS AND DISCUSSION**

In the span of a few short weeks, EH rapidly mobilized to provide both COVID-related material and free general equine educational material to the horse community. Due to the unique national nature of the COVID-19 pandemic, a united approach by EH members was critical. The approaches employed made it possible to provide synchronized responses to similar questions being asked of EH members by clientele in their respective states. As an established Community of Practice group (now called a Learning Network), the EH members were poised to release timely information in a variety of online modalities. Finally, the amassed contact lists, which included EH members’ email lists, social media contacts, and equine industry partnerships, magnified the potential reach of EH contact many times over.

The initial step taken by EH in mid-March was to provide open access to certain ExtensionHorses.org online courses free of charge for anyone interested in learning while sheltering in place. By the end of April, there were 576 users of that content. Members of EH also produced additional videos to post on social media on various equine topics (e.g., tying quick-release knots and grooming horses). These actions generated immediate access to content and supplemental resources for instructors, volunteer leaders, teachers, parents, and interested horse industry enthusiasts suddenly thrown into an unfamiliar online environment.

From mid-March to early April, EH members developed and implemented a plan to create and share new COVID-19-related content. Three infographics were developed and were disseminated between March 31 and April 2 (Table 1) providing COVID-19-related information impacting horse owners/businesses. On April 2, the EH group met and identified topics for webinars and podcasts pertaining to COVID-19. By April 23, just 21 days later, three podcasts were recorded, edited, and uploaded, and three webinars were developed, broadcasted, recorded, and uploaded to YouTube (Table 1).

**Infographics**

The infographics format allowed the team to compile guidance on COVID-19 from trusted, science-based sources into more concise, visual formats for both quick reference and to achieve broad distribution on social media platforms. The overall total organic Facebook post reach for the infographics was 131,765 (Table 1). The most popular infographic was titled “Defining Essential Equine Care” (Morrison et al., 2020a), with a total reach of 98,472 on Facebook. Many states had significant variation and lack of clarification regarding which businesses and activities were defined as essential (and thus allowed to continue) and nonessential
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(meaning the activity should cease immediately). The infographic helped provide guidance on essential equine care, realizing that COVID-19 mandates varied by state. Content for infographics was created with enough latitude to be interpreted as needed.

An additional value-added aspect of developing the infographics was the engagement of an undergraduate student in the process. During a time when students and faculty were trying to adapt to social distancing and an unplanned virtual work environment, a motivated undergraduate joined the team. The inclusion of the undergraduate student added instructional and professional development elements to the infographic project. The student was able to gain real life experience during a highly time-sensitive situation. Her participation augmented her skill set and provided an opportunity to engage with national extension specialists from multiple institutions throughout the United States to acquire greater familiarity with extension education and outreach.

**Webinars**

The Facebook announcement (comprising a graphic listing the topic series and a link to the first webinar) that was utilized to advertise the webinars reached 84,005 people and was shared 535 times. The EH members agreed that the financial impact of COVID-19 on equine businesses was a primary concern of the horse industry, which was reflected by the extensive reach and sharing of the financial assistance webinar Facebook announcement. The financial assistance webinar featured representatives from the United Horse Coalition and American Horse Council describing safety net programs available for individual horse owners and federal programs available to small business owners through the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The overall live views for the financial assistance webinar were 387, which greatly exceeded the typical webinar audiences of ~25 to 50 people (Table 1). It was by far the most popular webinar with 2,449 total views; the majority of views were on the ExtensionHorses YouTube channel following the live webinar. The large volume of views highlights the major concern of the equine industry about the economic impact of COVID-19. When participants were asked about their current financial outlook, 66% of respondents indicated they were either currently in need of or expected to be in need of financial aid in the next 2 mo, with only 27% reporting that they were “ok financially” (Fig. 1). With the income of many equine businesses derived from activities considered “non-essential” (such as lessons or trail riding), the partial or full shut down of many states had a clear negative economic impact on the equine industry.

Individual barn owner feedback revealed a struggle with the decision to keep their barns opened to horse owners and lesson clientele at some level, or to close to all but essential employees. The second webinar addressed the crux of the issue—biosecurity and sanitation. A shared barn has many surfaces and equipment that are touched by multiple users, with surfaces that are difficult to disinfect through commonly recommended practices. Barns often share common grooming/washing areas, tack, and cleaning equipment (e.g., wheelbarrows, pitchforks, etc.). This webinar featured a veterinarian specializing in biosecurity who educated participants about areas of concern at equine facilities, modes of reducing transmission, and potential liability should an employee or visitor contract the virus. Results from live webinar polls show that the most common response to COVID-19 was to close the barn (39% respondents, Fig. 2). Twenty-five percent of barns remained open during the COVID-19 mandates but had set up specific safety precautions to reduce the spread of COVID-19. Of concern were the 10% of businesses that had no precautions in place to enforce social distancing or protect against COVID-19. All respondents found the webinar useful, while 78% planned to utilize the information provided.

The third webinar focusing on boarding contracts (already in planning stages prior to COVID-19) featured a lawyer specializing in equine law. It became timely as the states’ declarations of “essential” activities stimulated many horse owners and barn managers to think critically about the

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**Figure 1.** Finances webinar poll. Live webinar participants were invited to complete a poll about their financial outlook (n = 261) during the webinar.

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necessity of and contents in a boarding contract. Barn owners were expressing concern about liability and employee safety, while horse owners felt that their rights to access facilities that they were paying to use were being restricted. Both groups wondered whose ultimate responsibility it was to provide essential horse care during an emergency. Webinar attendees reported (in the live webinar polls) that 66% have a boarding contract in place (Fig. 3). From the questions asked, it was apparent that many of those current contracts do not sufficiently cover emergency situations. This webinar ran an extra 1/2 h due to the extensive questions by attendees, and willingness of the speaker and hosts to remain online.

**Webinar Participant Feedback**

Throughout the live webinars, several short polls asked attendees about their role(s) in the equine industry, questions specific to each webinar’s content (Figs 1–3), and how useful the webinar content would be in helping them make decisions. Responses from the polls to live webinar attendees found that out of 616 participants, most were from our target audience, horse owners (27%), and/or small equine business owners (29%). The resounding majority (99%) found the webinars useful, and most (80%) said that they would use the resources they learned about in the webinars (Table 2).

A 17-question survey was sent out to all participants present during any of the three live webinars following the third webinar (approximately 2 wk after the broadcasting of the first webinar and just 1 d after the broadcasting of the third webinar). Thus, completion of the survey from those that attended the live webinars varied greatly, with only 6% of participants from the first webinar (financial assistance), 17% of participants from the second webinar (biosecurity), and 44% of participants from the third webinar (boarding contracts) submitting responses. For future webinars, in order to gain a higher percent completion for evaluations, surveys should be sent as soon as possible after the live webinar concludes.

Most survey respondents (from all three live webinars, n = 105) found out about the EH webinars from Facebook (40%). This shows successful conversion of Facebook posts into webinar attendance. Additionally, respondents learned about the webinars through email (21%) and word of mouth (24%). Most respondents reported that they learned a high amount or moderate amount of information (93%) from the webinars. This percentage closely correlates with results from a similar poll question asked during the live webinars, where 99% of participants found the information presented in the webinars useful (Table 2), indicating that EH was able to provide pertinent information, with the right level of detail, to the equine community about issues related to COVID-19. Over 85% of survey respondents had a high level of satisfaction with using a web-based platform, and 88% of respondents were highly likely to recommend future EH webinars to others, with 12% moderately likely to recommend future EH webinars. The positive responses are encouraging since webinars are an accessible way for Extension professionals to deliver workshops during the quarantine period.

**Podcasts**

The podcasts provided an opportunity to personalize the impact of COVID-19. Each podcast featured guests from the equine industry recruited by EH members to share personal stories and business decisions revolving around COVID-19.
impacts. The three podcasts had total downloads of 276 (Table 1). The most popular podcast was “Covid Tales Part 1” (Brady and Hiney, 2020), with a total download of 186. Besides being available the longest period of time, it was also the most widely promoted, with help from the featured guest who discussed the many factors that led to her completely closing her barn to the owners of horses boarded at her business. The second podcast (Greene and Hiney, 2020a) featured two veterinarians from Vermont and California who discussed how their own and local practices were dealing with treating horses at the barns. Equine professionals, including veterinarians and farriers, are still visiting horse barns to provide essential care, but many changed their methods to decrease potential exposure to clientele. They chose to make their own business decisions about biosecurity and their personal risk. The second podcast was downloaded 42 times (Table 1). In the third COVID-19 podcast (Greene and Hiney, 2020b) two barn owners (Michigan and Vermont) and an Arizona 4-H and Pony Club leader (related to a boarding/lesson barn owner) shared their experiences with different levels of barn restrictions and efforts to minimize risk while still allowing clients to visit their horses. The third podcast was downloaded 48 times (Table 1). The podcast content provides the listeners with examples of how the various barn owners and veterinarians were responding to restrictions, mandates, and personal safety related to COVID-19 and equine businesses. This provides opportunities to see how others respond to situations that listeners may be experiencing in their own equine situation.

Roadmap to Success and Next Steps

The key to the effective and rapid EH response was the fact that EH is an existing, active Learning Network. A Learning Network is a group of experts with specific interests who learn together, compile and share new information, and support each other’s work. The national eXtension program, along with professional associations for those doing extension work, has promoted Learning Networks with varying success. The EH group is one of the most productive and long-standing Learning Networks affiliated with eXtension as demonstrated by recognition by NIFA with the 2010 Partnership Award for Effective and Efficient Use of Resources and several other national awards. Network characteristics that contributed to EH success in the COVID-19 crisis include:

- Extension experts that connect nationally and virtually, meeting regularly to share the latest research and best practices.
- Having a finger on the pulse on the needs of the industry at the county, state, and national levels.
- Sharing the workload divided by talents, interest, and access to resources.
- Ability to quickly peer review products prior to distribution.
- Established audiences and methods for content distribution (email lists, social media).
- Partnerships with other local and national horse industry groups.
- Established reputation and brand as a trusted source of information and able to translate science-based information to levels understood by the average horse person.

In the case of the COVID-19 pandemic, having an established Learning Network was particularly helpful. The EH group members were already comfortable working virtually with each other. The team approach provided momentum as well as peer support at a time when members were working alone from home offices.

The impacts of the first wave of EH educational outreach are still accumulating and the group is preparing for the next steps. Group members have reported that EH materials have been shared among Extension colleagues in other topic areas and by those with teaching responsibility, serving as a template for their own topical educational pieces. The infographics and links to EH content have been recirculated by university communications departments to additional social and mainstream media services.

An attestation to the status of EH as a trusted resource can be seen in the number of local and national news groups and equine industry organizations who have either cited or directly quoted information from our provided resources for their own articles for their membership. Morning Ag Clips, a national news service, shared two articles (https://bit.ly/2A8tBD6, https://bit.ly/3cpqo04), and those in turn were picked up by local media publications (e.g., https://bit.ly/3bh1aj, https://bit.ly/3bkjkmy). The United States Eventing Association transcribed and edited the biosecurity webinar content into an online article (https://bit.ly/2YPidXg). The financial webinar was the subject of four articles (to date), published by the High Plains Journal (https://bit.ly/2zlIT4), United States Trotting Association (https://bit.ly/3fwybeB), the Equine Chronicle (https://bit.ly/3fxtCAN), and even the Canine
The EH response to COVID-19 is ongoing: the next wave of content will be based on feedback from two recent surveys. Offering additional follow-up webinars and/or expanding popular webinars into short courses will expand knowledge gained and potentially behavior changes of participants (Anderson et al., 2020). On March 31, EH released a survey titled “State Responses to COVID Relative to the Horse Industry.” Feedback from this survey provides insight on similarities and differences on how states have responded, and will guide content development that is national in scope but adaptable to state needs. The COVID-19 webinar survey responses have identified areas where further education is needed. Requested topics include preventative equine veterinary care/vaccinations during a pandemic, incorporating biosecurity and sanitation into barn protocols and boarding contracts, and how to keep clients safe during the reopening process. As states begin to slowly reopen businesses and potentially brace for a secondary wave of COVID-19 and potential repercussions, EH will continue to create materials to address equine industry needs.

In conclusion, as COVID-19 spread across the United States, the EH group quickly responded to the needs of the horse industry due to an existing, recognized online presence, a breadth of expertise and tools, and well-established communication channels. When other organizations were convening or receiving training to use online tools to connect with virtual audiences, EH was already publishing. Team members were well versed with collaborating with national colleagues, working at a distance, carrying on a national dialogue, and creating and delivering pertinent online content. The established working relationships of EH members allowed for complementary strengths and skills to be put to use, focusing on both national and local audiences. The peer review process by the experts within EH allow for work to function across university lines, and for much quicker turnaround on content produced with multistate authorship. With EH already viewed as a trusted resource by a national audience of tens of thousands of target equine community members, the content spread quickly and was available at the time and level of need by horse owners and small business owners.

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