

Athletic Training Preceptors' Perceived Learning Needs Regarding Preceptor Development

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Context: Athletic training programs can develop their own content and mechanisms for developing preceptors. Ideally, preceptor development sessions should meet the needs of both the educational program and the preceptor; however, there is a gap in the existing literature regarding athletic training preceptors' perceived learning needs.

Objective: To examine preceptors' perceived learning needs regarding preceptor development and determine if differences occur based on preceptor characteristics.

Design: Cross-sectional.

Setting: Online survey platform Qualtrics.

Patients or Other Participants: Seventy-nine preceptors (31.66 ± 8.63 years, male = 32, female = 47, years certified = 9.46 ± 8.27 , years as preceptor = 6.08 ± 5.88) affiliated with professional programs in National Athletic Trainers' Association District 4.

Main Outcome Measure(s): The Preceptor Needs Assessment included 5 sections (Teaching and Learning in the Clinical Setting, Evaluating Students, Communication, Student Development, and Mentorship). Preceptors were asked to rate topics in each section on their perceived level of helpfulness (1 = *not helpful*, 2 = *somewhat helpful*, 3 = *very helpful*) if they were to be included in a preceptor development session. Descriptive statistics (ie, means) were used to examine the data, and differences in perceived needs based on demographic characteristics were assessed with χ^2 analysis. Statistical significance was set a priori at $P \leq .05$.

Results: Topics in evaluating students (2.39 ± 0.47) and teaching and learning in the clinical setting (2.38 ± 0.41) were rated most helpful and concepts in mentorship (2.13 ± 0.59) least helpful. No significant differences in perceived helpfulness of any topics were noted in relation to participant characteristics, including years as a preceptor, clinical setting, and educational background ($P > 0.05$).

Conclusions: Learning needs of preceptors do not appear to be based on years of experience, clinical setting, or educational background. Athletic training programs should aim to offer preceptor development related to teaching and learning in the clinical setting while specifically providing guidance on developing students' critical thinking skills and teaching clinical decision making.

Key Words: Clinical education, athletic training education, preceptorship

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INTRODUCTION

Clinical education experiences are an integral component of an athletic training student's education.¹ As students learn skills and didactic concepts in the classroom, they are also asked to apply their knowledge and skills to real-time patient populations in a clinical setting. Commission on the Accreditation of Athletic Training Education standards require that athletic training students be directly supervised by a preceptor during all clinical experiences.² Preceptors are typically chosen because of their clinical experience and expertise, but these individuals frequently lack formal training in education.¹ Despite this lack of training, preceptors are expected to teach the athletic training students they supervise, evaluate each student's knowledge and clinical skills, and foster their development during patient care.² Furthermore, preceptors have been identified as some of the most influential individuals in an athletic training student's academic preparation.^{1,3}

An additional challenge for preceptors is their busy schedules and work to maintain high quality patient care, and the responsibilities of serving as a preceptor can be overwhelming.⁴ Recent research suggests preceptors experience role strain because of the increased demands serving as a preceptor places on their time.^{4,5} Providing preceptors with appropriate training and socialization into their roles may help mitigate some of that role strain.⁴ Recently, Mazerolle et al⁶ found preceptors are typically socialized into their roles through a combination of formal and informal processes. The formal processes included preceptor development sessions, which were beneficial in providing the expectations of a preceptor as well the opportunity for the preceptor to mingle with other preceptors.⁶ It was concluded that encouraging interaction among preceptors would help facilitate the socialization process.⁶ Athletic training program administrators should make a concerted effort to prepare preceptors for the role of being an educator in order to better support preceptors and ensure they provide the highest quality instruction and experiences for students. To those ends, creating effective preceptor development programs should be a priority.^{4,7} Administrators responsible for designing preceptor development programs also need to be cognizant of how to best approach teaching and learning with practicing clinicians, who are often working to balance busy schedules.

Preceptor development programs have continued to evolve as athletic training education has developed, and so have the standards that govern accredited educational programs. Previous accreditation standards required specific content to be included in preceptor (formally called approved clinical instructor) development.⁸ Current accreditation standards are less specific and only state that "a preceptor must receive planned and ongoing education from the program designed to promote a constructive learning environment."² These changes have given programs autonomy in how they develop preceptors to better fit the different preceptors' learning needs.

To provide their preceptors with the most relevant and helpful information, athletic training programs should understand what topics and ideas their preceptors would like to discuss during preceptor development. The current Commission on the Accreditation of Athletic Training Education standards provide programs the freedom to open that dialogue with their preceptors and then create development sessions that are specific to their needs.

Preceptor development programs are designed specifically to prepare individual professionals from across health care disciplines to assume the preceptor role for a specific program. These individuals are expected to complete numerous tasks related to a student's academic and professional development, including integrating classroom ideas and concepts into the clinical setting.^{7,9,10} However, without a complete understanding of the academic program's goals, methods for clinical instruction, and student evaluation processes, among other things, clinicians may struggle to become comfortable in their roles as preceptors. Research in pharmacy suggests potential topics of interest to preceptors include motivating students, information on educational strategies, providing student feedback, and understanding various teaching and learning styles.⁹ Nursing preceptors demonstrated increased levels of both confidence and comfort after a preceptor development session that included topics related to their preceptor roles, such as teaching critical thinking and providing positive feedback.¹¹ Currently there is a gap in the existing athletic training literature regarding the perceived needs of preceptors, specifically in regards to preceptor development. As many programs work to create more specialized preceptor development, there is a need to better understand where preceptors are seeking additional information and education. Therefore, the purpose of this study was to examine preceptors' perceived learning needs regarding preceptor development. Additionally, we aimed to determine if differences in perceived learning needs occur based on demographic characteristics, including years of preceptor experience, gender, clinical setting, and average number of students supervised at one time.

METHODS

Study Design

This cross-sectional study used an online survey, the Preceptor Needs Assessment, to ascertain preceptors' development and learning needs. The university's institutional review board approved the study.

Participants

A total of 79 preceptors (age = 31.66 ± 8.63 years, male = 32, female = 47, years certified = 9.46 ± 8.27 , years as a preceptor = 6.08 ± 5.88) affiliated with professional level programs in National Athletic Trainers' Association District 4 completed this study. All participants who responded were athletic

Table 1. Participant Practice Settings and Educational Background

	No. of Participants
Practice Setting	
College/university	31
Secondary school	31
Clinic	4
Clinic/hospital	1
Clinic/secondary school	8
Performing arts	2
Other	2
Educational background	
Professional bachelor's (AT)	27
Professional master's (AT)	14
Postprofessional master's (AT)	20
Master's (not AT)	14
PhD	2
EdD	1
Other	1

Abbreviation: AT, athletic training.

trainers and supervised 2 or 3 students on average at one time. Information regarding the participants' current practice settings and educational background can be found in Table 1. To recruit participants, all athletic training program directors in the district ($N = 80$) were contacted via e-mail and asked if they would be willing to disseminate the survey to their program's current preceptors. The e-mail included the following information: the purpose and importance of the research study, a request for participation, and a Web link to the online survey. We asked program directors to respond to the initial e-mail with the number of preceptors to whom they forwarded the information to help calculate a response rate. Eighteen program directors (22.5%) indicated they would pass the information on to 323 preceptors. Reminder e-mails were sent to all program directors and subsequently forwarded to the preceptors every 2 weeks for a total of 6 weeks. The 79 respondents represent a 24.5% response rate.

Instrumentation

The research team developed the Preceptor Needs Assessment using current research that assessed preceptor development to guide the conceptual framework.^{7,9,11} In the Preceptor Needs Assessment, we included items preceptors identified as important to discuss during preceptor development,⁹ as well as items identified by athletic training program directors as important to consider when selecting and developing preceptors.⁷ We created the Preceptor Needs Assessment to identify topics preceptors perceived to be most helpful if they were to be included in a preceptor development workshop. The survey included 5 sections: (1) Teaching and Learning in the Clinical Setting, (2) Evaluating Students, (3) Communication, (4) Student Development, and (5) Mentorship. Each section had numerous statements (ranging from 3 to 22) related to topics that could be included in a preceptor development session. Preceptors were asked to rate each topic using a 3-point (1 = *not helpful*, 2 = *somewhat helpful*, 3 = *very helpful*) Likert scale on how helpful that topic would be to them if it were included in a preceptor development session. In addition to the Likert scale items, preceptors were asked to identify any other topics

Table 2. Internal Consistency Values for Each Survey Section

Section	No. of Statements	Cronbach α
1. Teaching and Learning in the Clinical Setting	22	0.932
2. Evaluating Students	3	0.720
3. Communication	10	0.918
4. Student Development	7	0.867
5. Mentorship	4	0.830

they felt would be helpful to add to preceptor development. Preceptors also answered a variety of demographic questions at the end of the survey.

Once the Preceptor Needs Assessment was developed, we sent it to a panel of 5 athletic training preceptors (3 female, 2 male) to evaluate the content validity, comprehensiveness, and completion time. Members of the panel represented both the college/university and high school settings, and had 1 to 20 years of experience as a preceptor. Panelists were asked to rate each item of the survey on a scale of 1 to 3, with 1 indicating *the item is clear and relevant to the instrument*, 2 indicating *the item is not relevant to the instrument*, and 3 indicating *the item is unclear/I don't understand this item*. Scale items that were rated 2 by more than 1 panelist were removed, and items rated 3 by more than 1 panelist were revised and amended as necessary. The panel recommended 10 of the items be clarified using examples or altered wording, and 1 item was deleted entirely because it was deemed redundant with another statement. Some concepts within the sections of the survey were reorganized based on preceptor feedback to help improve the continuity of the survey. Internal consistency for each section of the survey was established with a Cronbach α , with resulting values ranging from $\alpha = 0.720$ to $\alpha = 0.932$ (Table 2). Standards published by Bland and Altman¹² indicate reliability for all sections is considered acceptable.

Data Analysis

The Preceptor Needs Assessment was delivered online via Qualtrics (Provo, UT), and all responses were collected within the software and stored on a university server. At the completion of data collection, survey responses were generated in IBM SPSS for Windows (version 22; IBM Corp, Armonk, NY). Descriptive statistics were used to examine the data through means, SDs, and frequency values. Means were calculated for each section of the survey and for each individual topic. Differences in perceived need of preceptors of various demographic variables including work settings, gender, years of clinical experience, and number of students supervised at one time were assessed with a χ^2 analysis. Statistical significance was set a priori at $P \leq .05$. Responses to the open-ended question were tallied, categorized by concept, and then recorded.

RESULTS

The average perceived level of helpfulness for each section of the survey was as follows: Teaching and Learning in the Clinical Setting, 2.38 ± 0.41 ; Evaluating Students, 2.39 ± 0.47 ; Communication, 2.23 ± 0.53 ; Student Development,

Table 3. Highest-Rated Most Helpful Topics by Section (Mean \pm SD)

Section 1: Teaching and Learning in the Clinical Setting	
1. Developing students' critical thinking skills	2.67 \pm 0.52
2. Teaching clinical decision making	2.67 \pm 0.55
Section 2: Evaluating Students	
1. Judging a student's readiness to handle different situations	2.46 \pm 0.57
2. Formally evaluating students' clinical skills and professional behaviors (ie, end of the semester evaluations)	2.44 \pm 0.57
Section 3: Communication	
1. Providing constructive feedback to students	2.35 \pm 0.66
2. Challenging students while being supportive	2.33 \pm 0.69
Section 4: Student Development	
1. Building student confidence	2.39 \pm 0.69
2. Helping students develop meaningful goals	2.38 \pm 0.56
Section 5: Mentorship	
1. Serving as a positive role model	2.29 \pm 0.72
2. Being a mentor versus being a supervisor	2.23 \pm 0.72

2.30 \pm 0.49; and Mentorship, 2.13 \pm 0.59. Overall, the topics rated most helpful in a preceptor development session were both in the Teaching and Learning in the Clinical Setting section of the survey: "developing students' critical thinking skills," 2.67 \pm 0.52, and "teaching clinical decision making," 2.67 \pm 0.55. The 2 topics rated most helpful in each section are listed in Table 3. No significant differences in perceived helpfulness of topics were noted in relation to any participant characteristics, including number of years as a preceptor, clinical setting, educational background, gender, or number of students supervised ($P > 0.05$). Participants were also asked to identify additional topics they would find helpful if included in a preceptor development session. The topics preceptors suggested in response to the open-ended question in the survey included discussing preceptor evaluations to allow for preceptors to improve over time, understanding the current generation of students, and integrating didactic coursework and clinical experiences.

DISCUSSION

Although we did not find any significant differences in perceived learning needs based on any demographic characteristics, the results of this study do provide insight into the topics preceptors believe would be most helpful to their development as clinical educators. The lack of differences in relation to demographic characteristics may indicate either that the needs of preceptors are very individualized or that preceptors have similar needs that are not dependent on setting or level of experience. In general, the literature regarding preceptor demographic characteristics and their impact on preceptor development is limited. In a 2011 survey,⁹

pharmacy preceptors reported that topics they would prefer to discuss in preceptor development sessions included strategies to engage and motivate students (69.1%), an update on teaching techniques (60.2%), and effectively questioning students (59.2%). The investigators in this study⁹ did not specifically examine preferences based on the preceptors' demographic characteristics. However, they did discover that preceptors who had previous formal training were significantly more confident in their ability to help students develop critical-thinking and problem-solving skills, to be clear when communicating their expectations of students, and to evaluate students. Similar to pharmacy preceptors,⁹ our participants suggested including topics related to teaching in preceptor development sessions, and ultimately rated the Teaching and Learning in the Clinical Setting section as the second most helpful on the survey.

Teaching and Learning in the Clinical Setting

The individual topics rated most helpful, developing students' critical thinking skills and teaching clinical decision making, each came from the Teaching and Learning in the Clinical Setting section of the survey, indicating preceptors would find information regarding different instructional methods and strategies helpful. Preceptors should be prepared to serve as teachers, and research suggests that they already use a variety of teaching strategies.^{13,14} The results from our study support the idea that the ability to teach is important to preceptors, and that they are interested in strategies to further develop their abilities to promote critical thinking, develop their students, and teach clinical decision making. This finding is further supported in pharmacy education, as residents reported teaching ability as a central component of serving as a preceptor.¹⁵ Similarly, athletic training preceptors often use a variety of teaching strategies with their students in the clinical setting, including hands-on activities and asking a variety of clinical questions.¹³ Additionally, clinical case discussions,¹⁶ encouraging student reflection,¹⁷ and questioning have been used as methods of developing critical thinking skills.¹⁸ Providing preceptors with specific strategies to help develop their students' critical thinking skills could help them better understand the techniques they already incorporate into their clinical teaching and provide additional methods for developing students.

By creating a supportive, dialogic learning environment, preceptors are able to provide students with opportunities to engage their knowledge and skills in a way that allows them to develop critical-thinking and decision-making skills.^{16–18} Preceptors can guide discussions about patient cases with their students,¹⁶ as well as pose questions regarding those cases that encourage students to analyze the information and come to a decision.¹⁸ One suggested method for facilitating discussion between preceptor and student is the One-Minute Preceptor method.^{19,20} This teaching method is designed for preceptors to use with their students and uses 5 microskills (ie, encouraging students to commit to a diagnosis early in the conversation, asking specific questions regarding the support the student used to come that decision, teaching general rules, reinforcing what the student did correctly, correcting student mistakes).^{19,20} As the preceptor-student interaction continues, preceptors are encouraged to provide students with positive reinforcement regarding appropriate behavior (eg, acknowledging when a student performs an evaluation correctly), as

well as to correct other mistakes, such as improper hand placement during a selective tissue test.^{19,20} Teaching preceptors this One-Minute Preceptor behavior model can help them use their time efficiently, have more effective student interactions, and improve their overall teaching behaviors.²⁰

Participants also rated “teaching students to incorporate evidence-based practice in patient care during clinical experiences” as a helpful topic in the Teaching and Learning in the Clinical Setting section. Previously, athletic training preceptors have reported that they use techniques such as encouraging critical thinking to help students implement evidence-based practice concepts to defend the choices they make in the clinical setting by examining and applying the information they had previously learned.¹⁴ Furthermore, encouraging preceptors and students to answer clinical questions together may increase student motivation to incorporate evidence-based clinical decision making in their practice.²¹ We recommend including content in a preceptor development session that provides preceptors with examples of how to incorporate both clinical decision making and the use of evidence-based practice in their approaches to educating students. This content could include information on how to use questioning in the clinical setting and how to facilitate discussions that require students to critically reflect on the information they are learning in the classroom. Similarly, content might include principles from the previously mentioned One-Minute Preceptor teaching method in which preceptors are taught to question the student as to his/her thought processes more so than specific content knowledge (ie, probing for specific evidence).^{19,20}

Evaluating Students

Our participants rated Evaluating Students as the overall most helpful section of the survey, and within that section, “judging a student’s readiness to handle different situations” and “formally evaluating students’ clinical skills and professional behaviors (ie, end of the semester evaluations)” were the topics rated as most helpful. Because student evaluation strategies can vary by program, assessing student competence and skill can be complicated²² and somewhat subjective.²³ For this reason, we recommend program administrators ensure their preceptors understand the evaluation procedures and the purpose of those evaluations. Altmann²⁴ reported that “student performance evaluation methods” was the topic most commonly addressed in nursing education preceptor development sessions. She suggested that because patient education principles are taught throughout professional nursing education it may be assumed preceptors already understand the basics of teaching.²⁴ Preceptors may feel they can teach but are less confident in their ability to evaluate performance. This may explain why our participants rated student evaluation as the most helpful section of the survey. Similarly, 57% of respondents in a survey of respiratory therapy program directors rated “assessment/evaluation of clinical performance” as the most important need in preceptor development.²⁵ Athletic training program directors also believe a preceptor’s ability to evaluate students is of great importance.²⁶ Both program administrators and preceptors see student evaluation as an important component of serving as a preceptor,²⁶ but program administrators may value it more highly than preceptors. This could be due to the link between student evaluations and overall education program

assessment, which may hold greater value to program administrators than preceptors.²⁶ Therefore, collaboration and communication between preceptors and faculty are imperative²⁶ to ensure preceptors fully understand the purpose of student evaluations to effectively evaluate student performance. Because the evaluation process can vary greatly across institutions, continual education on a program’s evaluation process is necessary to ensure that students are receiving appropriate feedback and the program is obtaining the desired data to assess student progress through the clinical component of the program.

Also in the Evaluating Students section of the Preceptor Needs Assessment, our participants indicated “judging a student’s readiness to handle different situations” as being helpful. There is no current standard method to judge a student’s readiness to progress in athletic training education. One emerging strategy in medical education for gauging student readiness is an entrustable professional activity (EPA). An EPA is an activity of daily practice that medical residents are expected to successfully perform throughout their residency.^{27,28} In athletic training education, EPAs could be used throughout clinical experiences as students are exposed to new concepts in the classroom to determine if a student can be trusted to successfully complete a task or handle a situation (eg, perform an orthopaedic evaluation of a knee). Entrustable professional activities follow 8 specific characteristics that help differentiate them from traditional competencies.²⁷ Three of these characteristics are that EPAs “must lead to recognized output of professional labor,” “should be executable within a time frame,” and “should be observable and measurable in their process and their outcome, leading to a conclusion (‘well done’ or ‘not well done’).”^{27(p1177)} Although competencies tell us whether or not a student can perform a certain skill correctly, EPAs can provide more information regarding a student’s ability to apply those skills in real-time situations. In this regard, they are like the current clinical integration proficiencies used in athletic training education. However, EPAs can be also used to determine if a student can be trusted to perform a skill independently, whereas clinical integration proficiencies are typically assessed during real-time patient encounters.²⁷ Entrustable professional activities are potential tools for athletic training educators and preceptors to use to help determine student competence and readiness to handle clinical situations. Further research is necessary to determine which EPAs would be needed for athletic training students before allowed to complete a skill independently. Before their implementation in clinical education, preceptors should receive thorough training on the use and assessment of EPAs.

Communication and Student Development

Preceptors also identified “building student confidence,” “helping students develop meaningful goals,” “providing constructive feedback to students,” and “challenging students while being supportive” as moderately helpful. Communication and promoting student development are the underlying themes of these topics. It is possible that preceptors rated these concepts not as helpful as others because they are similar to interpersonal skills athletic trainers use during daily patient interactions. Developing goals, providing feedback, being challenging as well as supportive, and helping patients build confidence are all integral components of clinical practice for

athletic trainers. One of the most integral components of the preceptor/student relationship is feedback, which can be both complex and dependent on the situation.^{29,30} Athletic training students have reported that feedback from preceptors regarding their performance and skills was one of the most helpful preceptor behaviors during their clinical education.³¹ The importance of providing student feedback has also been documented in education programs in pharmacy,^{15,30,32} respiratory therapy,²⁵ medicine,³³ and nursing.³⁴ The topics these participants indicated would be moderately helpful are largely rooted in providing feedback in many of its forms. Each time a preceptor provides a student with feedback it can be considered as a feedback encounter. These encounters are made unique by several characteristics, including the purpose of providing the feedback, the timing, the content and specificity of the feedback provided, and the level of privacy of the encounter.²⁹ Helping preceptors understand feedback and develop the ability to provide feedback by including discussions and/or scenarios during preceptor development sessions could help preceptors implement more effective approaches to providing student feedback during clinical education.²⁹

Mentorship

The Mentorship section of the survey was rated the lowest of all sections. Why preceptors rated this section lower than any of the others could be due to the variety of statements within the section, as some of the concepts specifically referred to the preceptor serving as a mentor whereas others addressed concepts related to the preceptor finding his/her own mentor. Omansky³⁵ described the role of a preceptor as guiding students from theory to practice, promoting critical thinking skills, and serving as a role model. Preceptors in our study indicated that they would find topics on “how to serve as a positive role model” and “being a mentor versus being a supervisor” as somewhat helpful. These are important concepts to nurture, because athletic training students have previously indicated providing support and interacting in a positive, confidence-building manner were helpful preceptor characteristics.³¹ Additionally, students were more likely to rate preceptors who served as a role model and were interested in teaching as excellent.³² Clinical education experiences and the preceptors who facilitate them can have a significant impact on an athletic training student’s career decisions and desire to persist in the athletic training profession.^{13,36} Preceptors mentor students through their communication, providing a realistic picture of the profession of athletic training, and modeling excitement and dedication to the field.³⁷ Mentorship has also been shown to be an integral part of students’ developmental process.^{13,36,37} Therefore, when creating preceptor development sessions, it is important to discuss the impact they have on students’ professional development and growth with preceptors.

Preceptors also indicated in their open-ended responses that they would find a few items, such as understanding this generation of students, helpful if included in a preceptor development session. Because preceptors have been identified as important individuals in an AT student’s education,^{1,3} we recommend providing preceptors with information regarding the educational program’s structure, goals, and objectives to better allow them to help students connect what they are experiencing clinically with the knowledge and skills they are

learning in the classroom. This generation of students, primarily millennial students, is comfortable with technology, desires immediate feedback, and has learned to multitask from a young age.³⁸ Therefore, discussing ways preceptors can engage these students by incorporating technology into clinical experiences or how to provide student feedback could prove helpful for preceptors, as well as help students connect their didactic coursework in different ways.

This study included some inherent limitations. The participants were limited to those preceptors in National Athletic Trainers’ Association District 4, and the results of the study may not be generalizable to preceptors in other districts. The small number of respondents may have contributed to the inability to see differences in relation to demographic characteristics. Additionally, the reported response rate could be inaccurate because we relied on the program directors to report the number of preceptors to whom they forwarded information regarding the survey. Program directors could have sent the survey to their preceptors but not responded to our request for confirmation, or they could have not sent the request for participation when they indicated they would do so. An additional limitation could be the variability of the numbers of items in each section of the Preceptor Needs Assessment. We designed the survey to be as concise as possible, but the range in topics per section could have impacted our results. Although the scale of the Preceptor Needs Assessment was reliable, the 3-point Likert scale may not have allowed for adequate variation in participant responses. Future researchers should consider exploring the perceived learning needs of preceptors in other districts to determine if the needs are similar in different geographic regions of the country. Finally, although understanding what preceptors need for their development is important, future research should also assess whether preceptor development sessions are effective at educating and elevating the skills of a preceptor.

CONCLUSIONS

As clinical education coordinators and program directors work to create the programming for preceptor development sessions, they should work collaboratively to determine which concepts and skills should be included to ensure that the needs of both the individual preceptor and the educational program are met. Although differences among preceptors may not have been found in this study, it is important to understand the needs of the preceptor. Because preceptors are such an integral component of an athletic training student’s education, it is important that each preceptor is prepared to assume his or her role. Athletic training program administrators should also engage in dialogue with preceptors regarding the knowledge and skills they would like to see included in a preceptor development program.

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