State of California Community Paramedic
CORE Education Program
January 13, 2015 – February 19, 2015
Report to California Office of Statewide Health Planning

May 28, 2015

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ACKNOWLEDGEMENTS:

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Executive Summary

Across the United States, the idea of community paramedicine is taking hold. This effort commits paramedics to providing services in addition to emergency medicine for community members in need. To become community paramedics, these providers need to be trained differently from the traditional paramedic to include more in-depth physical assessments and psycho-social skills as well as knowledge of community resources for referral.

California's EMS Authority has shown interest in how community paramedics might function in this state. To that end, they contracted with UCLA's Center for Prehospital Care to develop, pilot and evaluate a community paramedicine training program. With the assistance of other experts and organizations with experience in this new model, a 12-module curriculum was piloted in eight sites across the state using a variety of educators and instructors.

The results show that traditional paramedics are capable of learning and embracing the skills necessary to become a community paramedic, with 77 of 79 completing the course with near perfect scores on all exams. Feedback from Site Coordinators, Public Health Educators and Medical Directors indicate the program should continue.

Background

Curriculum

In summer 2013, Howard Backer, MD, MPH, FACEP, Director of the State of California EMS Authority (EMSA) and principal investigator for the State of California Community Paramedic (CP) Pilot Programs, reviewed community paramedic curriculums around the United States and Canada. After consultation with other CP medical directors, Dr. Backer chose the Community Paramedic Curriculum 3.0, developed by the North Central EMS Institute (St. Cloud, Minn.) and The Paramedic Foundation (St. Cloud, Minn.) as the basis for the State of Californian CP Education program.

In October 2013, California's EMSA developed a CP Education Taskforce to review the 3.0 Curriculum and make recommendations to enhance it and customize it, if necessary, for California. The Taskforce met in San Francisco in December 2013. These recommendations included using the first seven modules from CP Curriculum 3.0 in their entirety along with the development of a California-specific CORE Curriculum. This additional education would be provided under the direction of the pilot site medical directors and principal investigators, and would require approval by EMSA. Details on each module are given later in this document. This new version of the curriculum was called the State of California CP CORE Education Program.

The Taskforce also recommended the CP CORE Education Program be competency based and lectures be delivered by subject matter experts (SMEs) from around the United States whenever possible. It was also recommended, that content be delivered using a small group, problem-based learning format. As the CP CORE Education Program did not require a clinical or social service internship, it was recommended that standardized patients be used for simulated patient encounters.

Training Centers

Originally EMSA selected two California Training Centers to provide the education, one in Northern and one in Southern California. After some consideration, EMSA decided to award one statewide contract to the UCLA Center for Prehospital Care (UCLA CPC), under the direction of Baxter Larmon, PhD, MICP. Dr. Larmon is a professor of Medicine at the David Geffen School of Medicine at UCLA and is the Director of the UCLA CPC. Steven Rottman, MD, FACEP, was selected medical director for the CP CORE Education Program. Dr. Rottman is a Professor of Medicine at the David Geffen School of Medicine at UCLA and the UCLA Fielding School of Public Health. Todd LeGassick, MPH, executive director of the UCLA CPC, was selected to administrate the CP CORE Education Program.

Delivery Plan

In April 2013, an outline of the CP CORE Education Program was submitted to California Office of Statewide Health Planning and Development (OSHPD).

The delivery plan went through several revisions before the final iteration mostly due to budget considerations and changing estimates on the time it would take to create the curriculum. When the delays started affecting the deadlines, Lou Meyer, California's CP Project Manager, brought in the Butte-Glenn (Calif.) Community College District as a partner in the curriculum development. In addition, UCLA CPC contracted with The Paramedic Foundation (St. Cloud, Minn.) to assist in the development and delivery of the program. This included assigning to the project the author of several of the Curriculum 3.0 modules, Anne Montera, RN, BSN, a public health nurse educator, as co-director.

The original educational plan was to have two scheduled CP CORE Education courses delivered in both Northern and Southern California. The first was to start in June 2013. The second was to start in August 2013 and would be delivered at sites different from the first sites. With a limited amount of local subject matter experts and a budget that would not support extensive travel, UCLA CPC recommended to EMSA that 1) the delivery include online course work and 2) the sites be adjusted to fit logistical needs of students. This included the establishment of eight remote classroom sites in the counties of Butte, Solano, Stanislaus, Alameda, Ventura, San Bernardino, Los Angeles and San Diego. EMSA approved the recommendations.

The new delivery approach consisted of online morning sessions by SMEs across the United States and afternoon sessions conducted by local personnel. The afternoon sessions would focus on problem-based learning based on the material discussed in the morning session. The final version of the curriculum contained more than 350 educational objectives to be delivered during two 8-hour days per week for six consecutive weeks.

Preparation for Delivery of CP CORE Education Program

Site Coordinators

Given there would be more than 70 CP candidates educated at eight remote classroom sites, over a six-week period, tight organization and supervision was essential.

Each remote site was required to have a site coordinator, approved by UCLA CPC, the local EMS Agency and the state EMSA. This coordinator would ensure the organization of the classroom and delivery of the objectives.

Their primary duties were to:
1. Be responsible overall for site training.
2. Attend all sessions.
3. Understand the CP CORE Schedule.
4. Act as site contact to UCLA CPC, State EMSA, Site pilot principal investigators and the local EMSA.
5. Identify a public health educator (PHE) and medical director.
6. Ensure the site facility is scheduled and meets all information technology requirements.
7. Ensure site faculty for all sessions.
8. Assist the PHE in small group discussions.
9. Maintain all site student records and attendance.
10. Coordinate all quizzes and final competencies.
11. Facilitate any "real-time" discussions with online SMEs.
12. Maintain the online grade book.
13. Attend an online instructor meeting every Wednesday during the program and for three weeks before the start of program.

All site coordinators were chosen by May 2014 (see Appendix III for each coordinator's curriculum vitae). The first site coordinator meeting was in June 2014. With delays in the start of the CP CORE Education Program, site coordinator meetings were discontinued until November 2014. At that time, each site coordinator had identified the classroom facility and enlisted a PHE and medical director for their individual site. These additional personnel were reviewed by UCLA CPC and approved by EMSA. The original intent was for the site coordinator to be relieved of other duties to manage this intensive work. That proved not to be the case. Still, much of the success of the CP Core Education Program was due to the site coordinators who dedicated an estimated 350 hours to the course on top of their regular work assignments.

Public Health Educators
The principal instructors for each of the remote sites were the PHEs. The PHEs were selected by the site coordinators and site PIs as experts in local public health issues. Most of these educators had limited knowledge of EMS so they were partnered with the site coordinators to deliver the afternoon small group, problem-based learning sessions. Each Site PHE had to be approved by UCLA CPC, the site PI the local EMSA and the state EMSA. (See Appendix III for the curriculum vitae for each PHE.)
The primary duties of the PHE were:
1. Understand the CP CORE curriculum, including schedule, lesson plans and assignments.
2. Be on site for all sessions except sessions 10 and 11.
3. Understand the local community psychosocial resources and organizations.
4. Coordinate and facilitate all afternoon activities.
5. Grade all quizzes and the final written exam.
6. Participate in final psychosocial standardized patient encounter.

The amount of work the PHE provided would conservatively be estimated to be more than 150 hours. Most of the Site PHEs (82%) worked on the CP CORE Education Program while performing their regular duties with their provider agency. One PHE was also the site coordinator (Alameda County) and another was also the site medical director (San Diego County).

Medical Director
The site medical director was responsible for the overall site specific medical oversight. In many cases, the site medical director was also the site pilot medical director or co-director. (See Appendix III for the curriculum vitae for each Site Medical Director.)
The site medical director had to be approved by the respective site PI, UCLA CPC, the local EMSA, and the state EMSA. Their job duties were to:
1. Understand the CP CORE curriculum, including schedule, lesson plans and assignments.
2. Be on site at a minimum for sessions 11 and 12.
3. Coordinate and facilitate the activities for session 11.
4. Deliver the final CP medical psychosocial standardized patient encounter.
5. When appropriate deliver the Medical Oral Interview (which was done by the medical directors for Carlsbad Fire and Orange County).

The time each site medical director provided is conservatively estimated to be at least 36 hours. All of the site medical directors worked on the CP CORE Education Program while they performing their regular duties. One medical director (San Diego County) was also the site and the PHE.

Curriculum and Program Development
Although the California CP CORE Education Program was going to use large sections of The Paramedic Foundation's Curriculum 3.0, there was a considerable amount of development required including:
- Expanding overall CP CORE objectives, to include the California version
- Developing the program schedule
- Creating a policy manual
- Developing lesson plans
- Developing quizzes
- Creating afternoon session activities and objectives
- Creating student evaluations
- Revising and creating PowerPoint presentations
- Identifying other media resources for the course
- Creating reference materials
- Developing outside class activities and homework assignments
- Identifying, engaging and scheduling subject matter experts and confirming their content

- Developing the learning management system
- Creating the final written examination
- Creating the final standardized patients

Additionally, two weeks before the start of the program, UCLA CPC provided an orientation program for the site coordinators, PHEs and medical directors. The intent of the instructor orientation was to allow the afternoon site educational staff time to prepare afternoon sessions.

Subject Matter Experts

UCLA CPC engaged some of the best experts in Community Paramedic and Mobile Integrated Health Care delivery from around the United States. Some of these experts were also involved as authors of sections of The Paramedic Foundation's Curriculum 3.0. The SMEs who delivered lectures in the CP CORE Education Program are listed below. (See Appendix IV for curriculum vitae for each subject matter expert.)

- Linda Allington, RN, MPH, MPA
- Howard Backer, MD, MPH, FACEP
- Jeff Beeson, MD
- Anne Jensen, BS, Paramedic
- Anne Montera, RN, BSN
- Christopher Montera, Paramedic
- Steven Rottman, MD
- Dan Swayze, DPH, MBA
- Mike Taigman, MS
- Niels Tangherlini, BA, Paramedic
- Michael Wilcox, MD
- Gary Wingrove

Facilities

Research shows that a proper learning environment is essential to any educational program. Six months before the program start, UCLA CPC worked with the site coordinators to identify the eight remote sites. Each remote site was required to have classroom seating and an additional room for small group discussions. Other requirements included high speed internet (at least 5MB), wireless Internet as backup, a projection system and a good sound system. The eight sites are listed below (more information is provided in Appendix III).

- Butte County / Enloe Medical Center
- Solano County / Medic Ambulance Headquarters
- Alameda County / Alameda City Fire
- Stanislaus County / Modesto's Regional Fire Training Center
- Ventura County / AMR Headquarters

- San Bernardino County / SB LEMSA
- Los Angeles County / Glendale Fire
- San Diego County / San Diego County Fire Training Center

UCLA CPC worked with each site coordinator and IT experts for two to three months before the course began to test the system in each remote site. Details on the findings can be found below in the Education Delivery section.

Candidates
The requirements for selection of candidates were: volunteering for the program, having at least 4 years of experience as a paramedic, and having the recommendation of the medical director of the local EMSA. A list of 79 candidates was presented to the state EMSA for approval it was strongly suggested that because of the intensity of this program that candidate should be placed on special duty and protected from normal working shifts. All candidates were required to read and sign that they understood the CP CORE Education Policy Manual. Candidates also filled out a biographical demographic form. A brief demographic summary is listed below and a detailed summary can be found in Appendix V.

- Butte County / 10 Candidates
- Solano County / 6 Candidates
- Alameda County / 6 Candidates
- Stanislaus County / 7 Candidates
- Ventura County / 15 Candidates
- San Bernardino County / 18 Candidates, 2 from Orange County
- Los Angeles County / 7 Candidates
- San Diego County / 10 Candidates

Candidate Demographics (Appendix V)
- Age
  - 53% under 35 years
  - 19% over 50 years
- Years of Experience
  - 22% less than 6 years
  - 25% between 7 and 8 years
  - 23% between 9 and 12 years
  - 15% between 13 and 17 years
  - 15% more than 18 years

- College
  - 51% some college
  - 28% associates degree
  - 20% bachelor's degree

- 1 candidate had Master's degree, and 1 candidate had a terminal degree

CP CORE Education Program Delivery

During IT tests with the remote locations it became clear that streaming educational content via the Internet was going to be difficult, primarily due to the speed of the Internet at the distant sites and its ability to handle complex files with multiple images or video. Educational research also shows that multiple images on a screen can be distracting to students during distance education courses and the images draws students' attention away from important information. A simple transmission seemed to be the best solution. The Paramedic Foundation had used a distance education program called Join Me, a product from LogMeIn, Inc., Boston, for educational courses in the past. This very simple internet-based program met the CP CORE Education Program's needs as it was simple to use and it allowed for communication between sites, UCLA CPC, and SMEs. It was also required little time to learn how to use. A back up program using GoToMeeting was also available. (See Appendix I for pre-course materials/online technology). Video presentations were coordinated in the morning sessions between UCLA CPC and the Site Coordinators before the course started.

A secured Dropbox site was developed to transfer all Site Coordinator and PHE course materials such as afternoon session activity materials, quizzes, and all final competencies. Dropbox is a cloud sharing network for photos, documents and videos. Dropbox was also used as a way to transfer materials to and from subject matter experts.

A learning management system (LMS), based in Moodle, an open-source learning platform, was chosen to host the course through the secured UCLA CPC system. Candidates, site coordinators and PHEs were enrolled into the LMS. Candidates could use the site to download course materials. Site coordinators as well as UCLA CPC had administrator rights. The LMS was divided into several sections including pre-course materials and each teaching session. Each session had that day's reading assignments, session objectives, and outside activities or homework. PowerPoint presentations and supplemental audio recordings were made available on request, usually within 48 hours of the session. Candidates were asked after each session to evaluate that day's activities via a short evaluation form. The LMS also hosted a student gradebook where site coordinators kept track of a candidate's attendance, homework assignments, participation grades, quizzes and final competencies. Candidates had access to the gradebook to see their performance and compare themselves to the mean scores of all 8 remote site candidates.

The LMS also allowed UCLA CPC to review CP CORE candidate evaluations in real time. This prompted UCLA CPC on a few occasions to immediately make changes in the course based on actual feedback. UCLA CPC also tracked candidate performances and looked for trends by sites.

CP CORE Education Program Instructional Sessions

The California CP CORE Education program began Jan. 13, 2015 at 0800 hours. There were a total of 12 sessions over six weeks. Mornings lectures were presented by SMEs from around the United States and simulcast to the eight remote site locations in California. Candidates were encouraged to ask questions during presentations using the application's chat or, on occasion, via the SME's cell phone.

Afternoon sessions had specific objectives, lesson plans and activities coordinated by the site coordinators and delivered by the PHE or medical director. These sessions primarily used a small group and problem-based education format.

A site coordinator meeting was held every Wednesday morning for two hours (see Appendix II for more information). This was conducted by UCLA CPC to review the materials that would be presented during the next two sessions and provide instructor development if needed.

Both UCLA CPC and The Paramedic Foundation were available to the site coordinators, PHEs, medical directors and students as resources during the entire 6-week course.

The seven modules were presented over the first 11 sessions. Session 12 was used for the final competency exams. The primary goals for each session are outlined below:

> Session 1: Introduction to California Community Paramedic program / Role of the Community Paramedic in the health care system
>
> Session 2: Public health and the primary care role of the Community Paramedic
>
> Session 3: Social determinants of health
>
> Session 4: Developing a culture of competency
>
> Session 5: The Community Paramedic's role in the community, Part I
>
> Session 6: The Community Paramedic's role in the community, Part II
>
> Session 7: The Community Paramedic's role in the community Part III
>
> Session 8: Psychosocial standardized patient encounters
>
> Session 9: Community Paramedic's personal safety and wellness

Session 10: Clinical assessment, application and skills for the Community Paramedic

Session 11: Standardized patient encounters of patients with medical complaints

Session 12: Final competencies

Course Competencies:

A summary of all the course competencies are listed below. A detailed list of the competencies can be found in Appendix VII:

Attendance: All students were required to attend 100% of the program. Two students had one day of absences and this was immediately made up through the site coordinator and PHE.

Participation: Each student was evaluated after each afternoon session by a graded participation tool that evaluated a candidate's problem solving, the use of provided information, the group process and professionalism. A satisfactory grade was required for each session and candidates who did not meet satisfaction would be counseled. No candidate needed counseling and 92 percent of candidates received "outstanding" for participation.

Quizzes: A minimum grade of 80% on each quiz was required. Three quizzes were given during the program, most being fill-in or essay. All students passed quizzes except one student on the first quiz. That student retook the exam and received a 95%. The average grades across all eight sites and site-specific high and lows for each quiz are summarized below:

Quiz 1 averaged 92% (site averages were 82% lowest and 97% highest).

Quiz 2 averaged 95% (site averages were 91% lowest and 97% was the highest).

Quiz 3 averaged 96% (site averages were 93% lowest and 99% highest).

For the security of future exams, a copy of each quiz is available by contacting Dr. Larmon.

Outside Activities and Homework
All students were required to complete activities outside the classroom in addition to homework. The site coordinators recorded these activities and homework assignments in LMS. All candidates completed all outside activities, with no exceptions. See Appendix VI for more information on outside classroom activities and homework.

Final Competencies

All candidates were required to pass the final written examination with an 80%. The exam had 50 questions that were fill in the blank and essay questions. By agreement with the state EMSA, no retakes would be permitted. Any candidate who did not pass the written final would not complete the program. The average on the final written exam across all eight sites was 96% (site averages were 92% lowest and 99% highest). The lowest score on the final written exam was an 89%. For security of future exams, a copy of the exam is available only by contacting Dr. Larmon.

All candidates were required to pass a psychosocial standardized patient encounter using an evaluation scoring tool. (See Appendix VII for the tool.) Candidates were given a chance to retake this exam if they did not pass the first time. Candidates were graded by the site PHE. Two different scenarios were available to the evaluator. To avoid any prior knowledge of the scenario, candidates were preselected for their scenario. All candidates passed the psychosocial scenario the first time. For security of future exams, a copy of the scenarios is available only by contacting Dr. Larmon.

All candidates were required to pass a medical standardized patient encounter using an evaluation scoring tool. (See Appendix IV for the tool.) Candidates were given a chance to retake a new encounter if they did not pass the first time. Candidates were graded by the site medical director or associate medical director. Two different scenarios were available to the evaluator. To avoid any prior knowledge of the scenario, candidates were preselected for their scenario. All candidates passed the medical scenario the first time. For security of future exams, a copy of the scenarios is available only by contacting Dr. Larmon.

All candidates were required to pass a medical director oral interview using an evaluation scoring tool. (See Appendix VII for the tool.) Candidates were given only one chance to pass this examination. All candidates passed the oral examinations. For security of future exams, a copy of the questions asked by the medical director is available only by contacting Dr. Larmon.

CP CORE Candidate Completion Rate

Seventy-nine (79) CP candidates started the program. One candidate, in Stanislaus County, dropped from the program due to personal reasons. A second candidate from Alameda County dropped from the program after session 4 because he was hired by a fire department outside of California. No candidate was lost from the program for academic or administrative reasons.

CP CORE Site visits

California was divided between Northern and Southern CP CORE education sites. Co-course director Anne Montera was responsible for site visits in the Northern area (Butte, Solano, Stanislaus, and Alameda counties). Dr. Larmon was responsible for the Southern sites (Ventura, San Bernardino, Los Angeles, and San Diego counties). Each site in the north was visited twice. Ventura and Los Angeles Counties were visited three times and San Bernardino and San Diego were visited once.

The sites reported the course director visits were extremely beneficial for candidates, site coordinators, PHEs and medical directors. Information was gained by the visit was used immediately to make improvements in the program.

The California CP Manager, Lou Meyer, conducted independent site visits to Stanislaus, Ventura and San Bernardino counties. Mr. Meyer and a representative from the California Health Care Foundation conducted site visits to Alameda, Solano, and San Diego counties. After each visit Mr. Meyer contacted Dr. Larmon and provided feedback. Most of the feedback was positive, but in some cases there were recommendations for improvement that were immediately acted on.

Session Evaluations

Candidates were required to evaluate each session before the beginning of the next session in LMS using a 4-point visual analog scale (1=poor, 2= fair, 3= good, 4 = excellent). Comments were encouraged. All evaluations were reviewed by the site coordinators and the co-course directors after each session. In many cases the candidates comments were useful to the coordinators to make immediate changes to the course. For information on a specific session, subject matter expert or candidates comments please refer to Appendix IX.

The candidates' average rating of the subject matter experts during the course was 3.3 out of 4. The highest score was a 3.6 and the lowest was a 2.6. There was a slight decrease in scores as the course progressed. The average score for the problem-based afternoon sessions was 3.2 out of 4. The highest score was a 3.3 and the lowest was a 3.0.

Mr. Meyer, the California CP Program Manager, attended most of the morning SME sessions. The CP course director would then contact Mr. Meyer for comments and suggestions.

Final Evaluations

Candidate Evaluations

At the conclusion of the program candidates were asked to fill out a 19-question final course evaluation. Most of these questions were asked in a 4-point visual analog scale, with a poor score at a 1 and an excellent score with a 4. Candidates were also encouraged to give written comments. Evaluations could be reviewed for each specific training site. Sixty-eight of the 77 (88%) of the candidates completed the entire evaluation. (See Appendix IX for detailed evaluation reports.)

Samples of the responses include:

When asked, *Prior to the CORE training, how well were you informed of the roles and responsibilities of a Community Paramedic?*, the candidates answered 49% somewhat and 34% poorly.

When asked, *What did you think of using ONLINE as a technology to deliver the subject matter experts?*, the candidates answered 18% fair, 51% good, 29% excellent.

When asked, *Rate the intensity of the course,* candidates answered 58% somewhat intense and 37% very intense.

When asked, *Would you recommend to lengthen the course in the future,* candidates answered 38% keep the same, 42% slightly longer.

When asked, *Rate the overall quality of the subject matter experts,* candidates answered 18% fair, 62% good, and 18% excellent.

When asked *Rate the overall quality of the afternoon sessions,* candidates answered 14% fair, 58% good, 28% excellent.

When asked, *Rate the coordination of UCLA,* candidates answered 48% good, 42% excellent.

When asked, *Rate the overall quality of the coordination of your site coordinator,* candidates answered 28% good, 69% excellent.

When asked; *Are your knowledge of public health now after the CORE, as compared to before CORE,* candidates answered 58% better, 37% excellent.

When asked, *Quality of the final written exam,* candidates answered 11% fair, 63% good, 26% excellent.

The question that provided the highest sense of accomplishment for the program administrators was, *Would you recommend the course to a member of your provider agency*, and candidates answered 42% probably, 55% definitely.

Each of the eight sites was evaluated for trends that were off the mean of the other site evaluations combined. There appeared to be a high level of inter-rater reliability between all educational sites.

Site Coordinators and PHE Evaluations

At the conclusion of the program, site coordinators and PHEs were asked to fill out a 24-question final course evaluation. Most of these questions used a 4-point visual analog scale, with a poor score at a 1 and an excellent score with a 4. Site coordinators and PHEs were encouraged to provide written comments as well. Evaluations could be reviewed for each specific training site. All of the site coordinators and PHEs completed the entire evaluation. For the majority of questions, the Site Coordinators and PHEs responded similarly. (See Appendix IX for site-specific evaluation reports.)

When asked, *what did you think of using ONLINE as a technology to deliver the subject matter experts*, they answered "excellent".

When asked, *Rate the intensity of the course*, they answered "somewhat intense".

When asked, *would you recommend to lengthen the course in the future*, they answered "keep it the same to slightly longer".

When asked, *Rate the overall quality of the subject matter experts*, they answered "good to excellent".

When asked, *Rate the overall quality of the afternoon sessions*, they answered "excellent".

When asked, *Rate the coordination of UCLA*, they answered "excellent".

When asked, *What is your candidates knowledge of public health now after the CORE, as compared to before CORE*, they answered "excellent".

The two questions that provided the most sense of accomplishment for the investigators were: *Would you recommend the course to a members of your provider agency for which* they answered "definitely" and *If your candidates never used their Community Paramedic knowledge and skills, do you think this course has changed the way they will practice EMS on typical 911 responses, for which they* answered "definitely".

Each of the eight remote sites was evaluated to see if there were any trends off the mean of the other site evaluations combined. There appeared to be a high level of inter-rater reliability between all educational sites.

<u>Medical Directors</u>
At the conclusion of the program, site medical directors were asked to fill out a three-question final course evaluation. Questions used a 4-point visual analog scale, with a poor score at a 1 and an excellent score with a 4. Medical directors were encouraged to provide written comments as well. Evaluations could be reviewed for each specific training site. Three-quarters (75%) of the medical directors completed the evaluation. (See Appendix IX for each responding medical director's responses.)

When asked, *what is your candidate's knowledge of public health now after the CORE, as compared to before CORE,* three answered "good" and three answered "excellent".

When asked, *If your candidates never used their Community Paramedic knowledge and skill, do you think this course has changed the way they will practice EMS on typical 911 responses,* three answered "probably", and three answered "definitely".

The question pilot administrators were most interested in was, *After administration of the Medical Director oral examination were you impressed by your paramedics, for which all respondents answered "definitely."*

<u>University of California San Francisco (UCSF)</u>
UCSF was an independent evaluator of the CP CORE Education Program. UCLA worked with Janet Coffman, PhD, MA, MPP, of UCSF's Institute on Health Policy, on the final report. See Appendix IX for the full UCSF report.

Final Course Review and Recommendations
UCLA CPC recommends that the CP CORE Program be continued in California. The success of the candidates in achieving high scores and the support of the instructors and educators is overwhelming.

Seventy-nine seasoned paramedics across the state were enrolled in the program with 77 (97%) completing it. The two who did not complete the program left it for personal, not academic, reasons. The quiz scores and final competencies were well above the required passing grades. The final course evaluations by the candidates, site coordinators, PHEs, and medical directors were all positive in their assessments of the program and the candidates.

A few of major factors that at the administrators of the pilot at UCLA CPC believe contributed to the success of the program include:

- Site Coordinators

  These people were dedicated to the success of the program from the early stages of development. Their administrative support, coordination, education and commitment were beyond compare. And, most of the site coordinators continued with their regular assigned duties while providing support to the CP CORE Education Program.
- Public Health Educators

  In most cases the PHEs were present at all 12 sessions. They were extremely competent in their roles as educators and in the delivery of the problem-based, small group learning activities.
- Subject Matter Experts

  The program was fortunate to have some of the finest subject matter experts in the United States to deliver content. Many of the SMEs also authored parts the curriculum. In most cases, the SMEs had never delivered lectures using distance technology. Subject matter experts were also tasked with providing reading assignments and afternoon small group/problem based learning assignments. Some were asked to contribute quiz questions.
- Technology

  The use of a simple online delivery system was useful. There were very few problems in the more than 45 hours of simulcast subject matter expert content during the 6 week of the program delivery. The use of DropBox for site coordinator materials and the Learning Management System also worked well.
- Dedicated IT Support from UCLA

  Early on it was recognized early on that the IT logistics to coordinate eight sites, 79 students, more than 40 staff, as well as outside observers, was going to be considerable. James MacCurdy, UCLA CPC IT Resource Manager, was invaluable for his technical assistance to the program.
- Paramedic Foundation Curriculum 3.0

  This base curriculum was the foundation for the pilot course. While there was a significant amount of development to deliver the course, it would not have been possible without the earlier work of The Paramedic Foundation's curriculum 3.0.
- Partnership with The Paramedic Foundation and Anne Montera

  Without the educational and logistical support of The Paramedic Foundation's Anne Montera, the program's success would have been in doubt.

- Communication with Staff

  The staff, including pilot administrators, instructors, coordinators, educators, information technology experts and others, numbered more than 40. The Wednesday meetings referenced earlier, along with a constant flow of e-mails and other telephone calls, created a relatively seamless communications stream. Dr. Larmon and Ms. Montera were available for individual and group calls and consults.

- The Paramedic Candidate Experience Requirement

  Experience as a field paramedic was found to be extremely important to the success of candidates. In many cases the paramedics would be draw on the experience of EMS calls to relate to the information tin the lecture and see how with this new knowledge and skills what positive effect(s) they could have on their community. The dedication of these candidates to a Pilot Program must be recognized. All volunteered and in some cases were handpicked by their site PI because of their outstanding approach with patients.

- Small Group/Problem Based Learning Format

  Small group, problem-based learning has been shown to drastically increase a student's ability to understand, retain and use educational knowledge and skills. From the inception of the CP CORE Education Program, this format was suggested for much of the content. Much of the development of lesson plans and activities fell to UCLA CPC to develop. PHEs and site coordinators were tasked with the facilitation of the activities, and they shared that using this format made delivery of the content interactive and promoted a positive learning environment. It also allowed the sites to customize the content to meet their specific community needs.

Although the program was a success, the participants agree that some aspects of the program could be improved.

- Orientation for Candidates:

  The selection of the specific candidates has been cited above as one of the success in the CP CORE Education Program. However, a candidate orientation a few weeks to a month before the program would have strengthened their experience and expectations. Many of the candidates had little idea about the training program and the role they signed up for. An orientation of the State Pilot Projects, course expectations, and sample course schedule, how to use the learning management system and a discussion about problem-based learning would have been beneficial.

- More Development Time for Subject Matter Experts:
  The quality of the subject matter experts is clear; however, candidates felt that in some presentations a few of the subject matter expert's presentations overlapped with other SME presentations. In the future programs, UCLA recommends allocating more orientation time to the content experts.
- Increased Development Time for Site PHEs:
  The PHEs were certainly a positive aspect yet they suggested a more intensive orientation for PHEs months before the program would have been valuable. In hindsight, the PHEs should have attended the Wednesday morning conference calls.
- Development of Medical Directors:
  Although we did have a medical director orientation, it became obvious after looking at candidate and site coordinator evaluations and the end of the course that a more detailed orientation would have been beneficial to them.
- Limitations of Technology:
  Most of the limitations regarding technology were due to the availability of continuous high-speed internet availability at the sites. One of the requirements for site facilities was to have a minimum internet speed of 5MB. Each site had an internet check weeks before the start of the program and all internet speed checks were conducted during the morning. What was unknown was that as the morning progressed and more people arrived at the facility and used the location's internet, speeds were drastically reduced in a few of the sites. Internet speed tests should be done during high internet usage times.
- Social Services Education:
  Candidates, PHEs and site coordinators recommend that during afternoon session's local social workers and social service organizations be available for questions and information. Some candidates suggested even group field trips or visiting social service provider centers to observe staff and clients.
- Develop a Template for an online Web of Resources:
  One of the most useful outcomes from the CORE Program was the site specific assignment to develop a resource book, or internet based resource of local community agencies that Community Paramedics and their provider agency could use to assist community clients. Candidates suggest that it would have been helpful if UCLA CPC had prepared a template.

- Quizzes and Final Written Exam:
  Although UCLA CPC felt comfortable with fill in questions for quizzes and the final written exam it was incredibly time consuming to grade all exams.
- Standardized Patient Scenario:
  It became apparent by the Dr. Larmon and Ms. Montera the afternoon sessions needed to have more direction and faculty development for the psycho-social and medical standardized patient scenarios.
- Physical Exam Module:
  It became apparent that after the Medical Physical Exam session (#10), that more development time is needed for this session. The explanation of why a paramedic needs advanced physical examination skills needs to be discussed so candidates can understand why this assessment is important. The subject matter expert needs to know the knowledge base of their candidates as well.
- Underestimated the Time for Development:
  Although having the curriculum 3.0 from The Paramedic Foundation and the partnership of The Paramedic Foundation was important, the amount of development time necessary to start the program was underestimated by a significant amount. Although the quality did not suffer, the pressure placed on the educational team to meet deadlines was heavy, and original deadlines were not met.
- Release Time for Candidates:
  It was recommended by UCLA CPC before the candidates were selected that pilot provider agencies give candidates release time during the CP CORE Education Program. The new subject matter, the intensity of the objectives, the amount of class preparation time and outside activities required no other obligations during the 6 weeks of the CORE Education Program. Still, 90% of the candidates continued working their regularly assigned duties during the CORE.
- Release Time for Coordinators:
  It was highly recommended by UCLA CPC to the site principal investigators that before, during and after the CP CORE Education Program, site coordinators should be given release time from regular duties. Still, 90% of the coordinators continued regular duties before during and after the program. This was both a significant hardship for the coordinators as well as for UCLA CPC.