This year, two Learning Outcome goals were assessed as requested. The first goal follows:

1. **What student learning outcomes were assessed this year and why?**

The EMS Paramedicine Program assessed the second Learning Outcome this year as it represents a different Learning Outcome from previous years. That Student Learning Outcome is:

“Students will demonstrate the ability to use critical and creative thinking to interpret and solve problems, as well as integrate information and prioritize interventions.”

The motivation for this goal selection this year is based upon each of the following:

1. These goals were constructed from national standard curriculum guidelines as well as accreditation-specific program goals. Great emphasis is placed on these goals as they are critical in assessing Program effectiveness and will continue to be assessed each year to trend progress and success. Placing such emphasis on notably aggressive goals is essential to the continued programmatic distinction this EMS Paramedicine Program has as well as continued efforts toward national recognition.

2. It is important to note that these goals are also related to the Department/Program goals of “Students will demonstrate the knowledge, skills, and attitudes to be successful in their field as practitioners as well as leaders” and “The EMS Paramedic Program will continue to be recognized in the region for its outstanding program attainment and accomplished graduates, as well as for its comprehensive programmatic content and innovative educational methodologies.”

3. In addition, College Goals 1 and 5 are also related: “Provide for an outstanding academic and professional growth experience for students at all CWU locations” and “Provide professional, high-quality, staffing, facilities, technologies, and appropriate resources to ensure the highest level of academic and professional development.”
4. And finally, University Goals I, IV, and V are also related: “Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.” and “Build mutually beneficial partnerships with the public sector, industry, professional groups, institutions, and the communities surrounding our campuses.” and “Achieve regional and national prominence for the university.”

2. How were the student learning outcomes assessed, who were assessed, and when?

This Student Learning Outcome was assessed through several contemporary evaluative methods. The methods employed in the assessment of this Student Learning Outcome included:

1. The use of scenario-based cognitive and psychomotor challenges through team-leader and team-member engagement in practical labs. The national education standards for EMS require a high degree of instructor-student engagement for effective, progressive learning. This relationship of student to instructor engagement is limited to a 6:1 ratio throughout the discipline. The EMS Paramedicine Program assures compliance with this standard by dividing the student cohort into functional groups during practical lab instruction. As such, the student to instructor ratio never exceeds 5:1 in the Program.

With each scenario-based lab instruction session the students are presented with a challenging and relevant prehospital case that demands effective leadership, critical decision-making, continuous problem-solving, and collaborative team member participation. These scenarios are standardized through the program as well as through national education guidelines. A standardized performance assessment matrix is utilized by the faculty to assess student performance in domain areas, including: cognitive performance, psychomotor skill performance, and affective domain performance. In addition, the assessment includes performance evaluation in areas such as team collaboration, effective leadership, critical thinking effectiveness, problem-solving effectiveness, active direction of team, supervision of skill performances, and many others.

All performance assessments of each student in these areas are documented actively onto standardized forms to record rated performance to specific criteria, instructions for improvement, and constructive feedback. This
assessment includes evaluating areas of leadership and team member collaboration and support. These forms are maintained in the student’s file in the program office for future student and programmatic referral.

It is important to note that the program’s application of scenario-based instruction in the practical labs have been met with praise and recognition from the National Registry of EMT Paramedics (NREMTs). In fact, the program’s process has been adopted by the NREMTs for future student skills assessments utilizing much of the performance metrics and scenarios that the program developed. The EMS Paramedicine Program at CWU has served as a pilot program to evaluate the NREMT’s new scenario-based performance assessment process given our acknowledged experience with this process.

2. These performance assessments are conducted and recorded by program faculty members that instruct in the lectures and labs. Typically, students undergo a formative instructional period followed by a summative assessment near the end of the quarter. On occasion, students are also encouraged to conduct peer-assessments during scenario-based instruction in the practical labs to encourage collaborative improvement.

3. This learning outcomes objective is assessed continually throughout the first academic year of students in the EMS Paramedicine cohort. As the students develop a greater scope and breadth of paramedicine diagnostic and treatment knowledge, they are exposed to increasingly complex and challenging scenarios throughout each quarter in the first year. By the end of the third quarter, the students are interpreting and decisively treating extraordinarily complex cases in paramedicine. The students terminal comprehensive assessment in the practical labs consists of several, most complex, scenario-based cases that demand exceptional critical thinking abilities, problem-solving skills, leadership talents, and team collaboration abilities.

3. What was learned?

By applying this methodology of assessment for practical skill performance and critical thinking, problem-solving, and leadership abilities, the students have demonstrated a superior ability to function beyond the entry-competence levels upon graduation and initial certification. Student performances in the NREMT Practical Skill examination attests to this success as 100% of all students from this program successfully complete the examination for the past five years. In addition, the graduate and employer surveys that are conducted annually by the program reveal confirmation of the
program’s graduate successes in the workplace. The following tables illustrate these performance summaries:

<table>
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<tr>
<th>NREMT Cognitive Exam Performance – 7 year comparison</th>
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<tbody>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Number of graduates</td>
</tr>
<tr>
<td>Number of graduate attempting</td>
</tr>
<tr>
<td>Number passing 1st attempt</td>
</tr>
<tr>
<td>Number passing subsequent attempts</td>
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<tr>
<td>Total passing</td>
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</tbody>
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From this table, the percentage of eligible students that successfully complete the NREMT Cognitive Exam from CWU’s EMS Paramedicine Program is 100%. Of those, on average, 93.9% pass the exam with only one attempt. This performance is well above the national average of 72% (2011). The EMS Paramedicine Program at Central Washington University remains a model education program for the United States.

<table>
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<tr>
<th>Employer Survey – Cognitive, Psychomotor, and Affective Performance – 7 year comparison</th>
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<tbody>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Number of graduates</td>
</tr>
<tr>
<td>Number of graduates employed</td>
</tr>
<tr>
<td>Number of surveys returned</td>
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<tr>
<td>Number of negative survey items</td>
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</tbody>
</table>
From this table, it becomes apparent that employers of our graduates are extremely satisfied with the graduates’ cognitive performances, skill levels, and professional, behavioral levels. Of all of the employers of our graduates for the past seven years, not a single employer indicated a negative response to the nineteen areas assessed through our employer survey instruments.

Summary statistics revealed that, of the responses from the employers on our graduate’s performances, more than 46% gave them the highest rating, more than 40% gave them the next highest rating, and more than 13% gave them the next highest rating (qualitatively equivalent to “excellent,” “very good,” and “good”). None were given less than a “good” rating. This translates into more than 86% consider our graduates superior to others in their cognitive, psychomotor, and professional behavior abilities. Detailed reports are available upon request.

4. What will the Program do as a result of that information?

The information derived is informative and important. The following summarizes our continued course of action:

1. If the University leadership and the Program faculty continue to seek national program recognition in EMS and aspire for discipline excellence, then the academic rigor and performance standards that the Program currently espouses should be maintained. It has long been known, anecdotally, that our graduates out-perform most other graduates, many seasoned practitioners, and even some veteran clinical preceptors. The Program will continue to strive to achieve and maintain *par excellence* instruction in assuring our graduates possess the necessary skills and talents to perform exceptionally in decision-making, critical-thinking, and problem-solving skills. We also continue to promote our Program Mission to graduate highly skilled, highly proficient, leaders in the discipline.

2. In addition, the Program will continue to promote success and endeavor to achieve improvements in student learning outcomes in this area. Specifically, the Program will seek additional means of information delivery, methods of instruction, and evaluative measures to assure maximal student comprehension and mastery of cognitive, psychomotor, and behavioral objectives.
The second Learning Outcome goal is describe below:

1. **What student learning outcomes were assessed this year and why?**

In addition to the second Learning Outcome, the EMS Paramedicine Program also assessed the fourth Learning Outcome this year as it represents a different Learning Outcome from previous years. That Student Learning Outcome deals with technological literacy and is:

“Program graduates can effectively demonstrate cognitive and skill competency on the use of contemporary diagnostic and therapeutic EMS-related equipment, computers, and other technology for EMS purposes.”

The motivation for this goal selection this year is based upon each of the following:

This particular goal represents a different assessment focus for our student and programmatic performances. Since previous annual assessments demonstrated exceptional goal attainment, it was imperative that different goals be selected for assessment this year.

This goal coincides with the departmental goal of: “Students will demonstrate the knowledge, skills, and attitudes to be successful in their field.” The ability of students to functionally utilize contemporary, discipline-related equipment is essential for their career successes.

In addition, this goal also conforms to the college goals of: “Provide for an outstanding academic and professional growth experience for students at all CWU locations.” and “Provide professional, high-quality staffing, facilities, technologies, and appropriate resources to ensure the highest level of academic and professional development.”

Lastly, the goal was selected as it also supports the university goals of: “Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.” and “Achieve regional and national prominence for the university.” These college and university goals provide direction for the Mission and Vision of the Program and, subsequently, these learning outcomes are congruent with those hierarchical goals.
2. How were the student learning outcomes assessed, who were assessed, and when?

This Student Learning Outcome was assessed through several diverse evaluative methods. The methods employed in the assessment of this Student Learning Outcome included:

1. The students routinely document all patient encounters in a dual format process: an electronic, online repository of information, as well as in a standardized, hardcopy form that is retained for programmatic and accreditation needs. Through these processes, students demonstrate their understanding for real-time documentation and electronic data transfer. They also gain experience in electronic health records (EHR) utilization and management to enable future national efforts for health surveillance.

2. Students also learn to gain operational proficiency in a variety of biomedical instruments through the practical lab instruction setting. As students attain formative and summative learning experiences in the practical labs, they also learn operational, trouble-shooting, and full-capacity application of each device in the program. The EMS Paramedicine Program prides itself in teaching contemporary theories, concepts, and application of innovative equipment.

3. The students performances in the terminal stages of the first academic year are assessed in a cumulative and summative manner. In doing so, the student demonstrate mastery in the utilization and maintenance of all relevant medical diagnostic and treatment equipment.

4. The survey process applied to the graduates and employers of our graduates include assessment parameters of the graduates’ use and understanding of discipline-specific medical equipment.

3. What was learned?

Information gained from the assessment of this Learning Outcome has proven to be valuable and useful for adjusting the Program’s strategic plan and for seeking additional resources.

1. Traditionally, students demonstrate a progressive learning experience in the documentation requirements of the Program and the profession. In the beginning, the students commit considerable errors in their documentation practices, but improve substantively over the course of their first academic year in the Program to the point of proficiency. This pattern is seen with each successive student cohort and is an expected characteristic of the neophyte nature of the students.
2. Once again consistency is demonstrated in the students’ progressive abilities to gain proficiencies in the various biomedical equipment related to paramedicine. As the students progress through the program in the first academic year of the major, they demonstrate increasing abilities to utilize the equipment to their full functional capacity. Upon completion of the academic year, all students achieve competency in the use of the equipment.

3. Graduates and employers routinely report that the educational effort of the EMS Paramedicine Program to assure students’ familiarity with biomedical equipment in the discipline is exceptional and meets most needs upon entry into their careers.

4. Several anecdotal reports and informal conversations with graduates, field practitioners, and other educators suggest that the EMS Paramedicine Program has fallen behind in providing educational experiences with contemporary equipment germane to the discipline. In particular, late mode cardioscope/defibrillators, video-guided laryngoscopy, bedside-point-of-service blood assays, and portable ultrasonography are devices that have gained considerable popularity and utility in the profession recently. The Program does not possess these innovative, but expensive, devices for student learning and exposure.

4. What will the Program do as a result of that information?

The information derived is informative and important. The following summarizes our continued course of action:

1. With regard to the electronic data collection (FISDAP) process, patient documentation procedures and practices, utilization of computer-based patient electronic health records, and medical information management, the Program will continue its current practices to assure student familiarity and cognitive development in the utilization and application of these formats.

2. Similarly, the Program will continue to facilitate the students’ familiarity and utilization of all biomedical equipment germane to the profession of paramedicine. The process employed to ensure student competency in this area has demonstrated effectiveness and will be maintained and monitored closely.

3. As time progresses, the disparity that exists with regard to the lack of contemporary equipment that is relevant to the profession will grow. The Program will make every effort to acquire the necessary equipment to maintain
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its recognition as an educational provider of contemporary information and equipment. Capital funds and alternative sources of revenue will be sought for these sizeable expenditures. It is likely that a failure of the Program to acquire these essential devices within the next three to five years will result in a reduction of the Program’s status as a premier educational institution for the instruction of paramedicine.

5. What did the Program do in response to the feedback from last year’s assessment report?

The feedback from last year’s assessment report has helped the EMS Paramedicine Program immeasurably in developing further the assessment of the Program’s learning goals. Input was invaluable and, coupled with the data collected, the Program is able to enhance assessment goals, practices, and improve outcomes universally. It is the Program’s plan to achieve near 100% accomplishment in goal-oriented outcomes in the years to come.

6. Questions or suggestions concerning the Assessment of Student Learning at Central Washington University:

This year’s questions and suggestions remain the same as previous.

Respectfully submitted by:
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December 4, 2013.