An Evaluative Study of a Health Information Management Program Following a Significant Curriculum Change—Part II
By Jennifer Peterson, PhD, RHIA, CTR

Abstract
In recent years, the health information management (HIM) profession has undergone profound changes. An increased emphasis on information technology and data analysis within the profession has led to significant changes in the educational training required for HIM professionals. To meet these changing educational needs, the AHIMA Council on Excellence in Education (CEE) released updated curriculum competencies in 2014. To ensure that these curriculum competencies were effectively implemented and that students were being adequately prepared for the current field, one HIM program underwent an in-depth evaluative study to assess student preparation and other effects of the curriculum changes. This study used a utilization-focused evaluation framework that included evaluation capacity building. The study specifically assessed the ability of the recent curriculum changes to adequately prepare students for the current HIM field as well as the effects of the changes on the program as a whole. This evaluative study went beyond the use of metrics and included surveys, interviews, and focus groups to collect data on students', graduates', and employers' perceptions. Analysis of the data resulted in major themes related to the perceptions of the effects of the curriculum changes on the HIM program and student preparedness. These findings were summarized in Part 1 of this article. Part 2 focuses on use of those findings both for the HIM program under review and for the HIM educational community as a whole.

Keywords
academic program evaluation, health information management, AHIMA CEE curriculum competencies, curriculum changes, utilization-focused evaluation, evaluation capacity building

Introduction
The recent changes in the health information management (HIM) profession and related changes in the AHIMA Council on Excellence in Education (CEE) curriculum requirements have led to significant curriculum changes in HIM educational programs. To determine the effectiveness of the curriculum changes, the preparedness of HIM graduates, and the effect of the changes on the program overall, one HIM educational program at a large midwestern public university undertook an in-depth evaluative study designed to focus on the evaluation of the changes in the HIM curriculum and academic program. This case study collected information regarding issues related to the curriculum changes to provide data that could be used not only for program evaluation but also for program improvement.

This evaluative study used surveys, interviews, and focus groups to gather information regarding the students', graduates', and employers' perceptions of the recent curriculum changes. Information gathered from these groups was used in conjunction with program metrics to answer the following questions:

1. What is the nature of current students', graduates', and employers' experiences related to HIM curriculum shifts from the 2012 curriculum standards to the 2014 revision? (This question focused on the student, graduate, and employer perceptions regarding the curriculum changes and preparedness for the HIM field.)
2. In what ways have the 2014 curricular requirements shifted the entry-level skills and knowledge of HIM graduates in comparison to the 2012 curriculum standards?
3. Considering the ongoing changes in the curriculum requirements, what are the implications for the HIM field and for individual programs moving forward?

The data gathered in this evaluative study provided insight regarding perceptions of the HIM program under review as well as the effect of the new curriculum on this program. The students, graduates, and employers who contributed to this study provided valuable information that could be used to improve the existing program and to continue to make improvements in the future. Ongoing changes in the AHIMA CEE required curriculum competencies provide challenges for HIM educational programs. Educational program changes usually require multiple levels of approval and take place over an extended time frame. The rapid changes in the HIM profession have resulted in repeated rapid changes in the required curriculum for such programs. The information obtained in this study provides valuable material to be used in developing an action plan for improvements related to the most recent curriculum changes as well as for forthcoming changes.

Involvement of stakeholders throughout this study and the use of the utilization-focused evaluation methodology enables the study findings to be used for improvement of the HIM program. As recommended by Patton, the stakeholders were included in the data analysis and were aware of the perceptions of the students, graduates, and employers as well as the program metrics.[1] In line with the theoretical concept of evaluation capacity building, the stakeholders were invested in the results of this study and wished to use these results to implement programmatic change and improvement.[2] Faculty, staff, and administration were aware that the recent curriculum changes were significant and that future changes are on the horizon. This study's findings will be an integral part of enacting improvements in the HIM program now and in the future as the program faces additional required changes. In addition to being of use to the program under review, the study's findings will have implications for HIM educational programs in general.

Implications and Action Plan for the HIM Program under Review
Information Technology Issues

Those participating in this study raised issues regarding the information technology (IT) components of the new curriculum. Their concerns and comments provide room for improvement in this area. Even before this study, improvements were made in this area. In fall 2017, an IT tutor was hired specifically for HIM students needing assistance in the IT programming classes. The tutoring was held in the HIM lab to make the students feel more comfortable in their environment and to help them become familiar with the HIM program and facilities. In addition, in late 2017, two recommended courses were added to the HIM curriculum. These courses, an early programming course and college algebra, were added as recommendations for students to complete before the first programming course because they would help prepare students for the rigor of that course. These courses are now recommended for all students who have no programming background and/or who have not completed a college algebra course.

In addition to commenting on the changes made before this study, respondents provided many valuable recommendations that could be implemented. Some of the most commonly cited concerns regarding the IT sequence revolved around the prerequisite IT programming courses. Questions were raised regarding the value of these courses in future IT courses and in the HIM field. In addition, students and graduates bemoaned the rigor of these courses and noted the concern that these courses took time away from other HIM major courses. Regardless of the students' perceptions of these courses, the IT department requires these courses as prerequisites for the IT courses required in the HIM major. However, the HIM program director discussed this concern with IT students and faculty. When asked how these programming courses can benefit the students and why they are required for other IT courses that do not require programming, the IT faculty noted that these courses help students develop critical thinking, logic, and problem-solving skills. These skills will benefit students in future IT courses as well as in other areas of the HIM field. This information can be provided to reassure students that while these courses are difficult and time consuming, they are valuable to their future both in IT classes and in the HIM field.

Another area of concern among students was that IT faculty seem to be unaccepting of HIM students in their classes or assume that HIM students have had the same background and experiences as the IT major students. This situation has arisen, in part, because the HIM students are the only non-IT majors in some of the IT courses. While the chair of the university's school of IT has supported the inclusion of HIM students in select IT courses, not all faculty are aware of or equally supportive of this decision. The HIM program director will continue to work with the chair of the school of IT to ensure ongoing faculty support of HIM students in these classes. One suggestion that will be investigated further is for the HIM program to work with the IT department to develop separate sections of the IT classes specifically for HIM students.

Students and graduates also raised concerns regarding the integration of IT and HIM classes and course content. HIM faculty and IT faculty will need to collaborate in this area to ensure that all faculty are aware of material covered in all courses and to enable crossover and content connections. As the curriculum change is recent and the last mixed-curriculum cohort students are currently seniors, this is an important need for the 2019–2020 school year. These collaborative efforts should also result in a stronger healthcare IT focus within the major as well as additional HIM faculty support of students in relation to healthcare IT jobs and opportunities.

One of the most difficult issues involving the new curriculum is fitting the IT sequence into transfer students' schedules and ensuring that they can graduate on time. Many students highly recommended that students be advised to take IT programming courses early in their college career, before starting their HIM major courses in the junior year. This four-year degree plan is not possible for transfer students. In the last two years, scheduling difficulties and heavy course loads have affected transfer students' grades as well as their time to graduation. All four students in the 2018 cohort had to attend an extra summer or semester to complete their degree requirements. While these students also completed minors in IT during that time, extra semester attendance is problematic for some students and is a negative metric for the program. HIM faculty will continue to work with the department's academic advisor to improve this situation. If possible, students will be encouraged to take IT classes at community colleges that they can transfer in for the first two IT courses.

Continuing to develop close ties with the IT department and working with IT faculty to ensure HIM student success in their courses are essential for the new curriculum. As the faculty and staff improve these issues, students will experience fewer problems and frustrations with the new curriculum.

Inclusion of Old Curriculum Content in the New Curriculum
While many expressed concerns about loss of some of the old curriculum content, much of this content has been incorporated into the new curriculum through integration into other courses. However, some areas have not been incorporated. Economics and some in-depth management content were removed from the curriculum. Trends in Health Information Management, a course that included guest speakers from various nonhospital healthcare settings, has been eliminated. Finally, and perhaps most significantly, one medical coding class has been eliminated. Many respondents expressed obvious concern that these content areas are still required or desired by students, graduates, and employers. In fact, some graduates asked for more business content in the HIM program, citing a lack of skills and knowledge in the billing and revenue cycle management arena.

The HIM faculty will need to investigate this area further. Additional courses cannot be added because of the limit on the number of hours required for a major. The HIM curriculum currently has no allowance for electives, and most students' schedules are full. Dividing the program into sequences, as some students

suggested, is not an option according to the required competencies. However, more of this content could be incorporated into existing courses. Guest speakers who spoke in the Trends in Health Information Management class could be brought into other classes or Student Health Information Management Association meetings. Students who have extra time in their schedules could be encouraged to take management or business classes if that is their area of interest. Ongoing evaluation and monitoring of the curriculum and the effect of the changes once fully implemented will also be important in addressing this area. The effects of the removal of the coding class will continue to be monitored closely as this was a large area of concern among local employers.

Student Recruitment

While many individuals providing information for this study touched on factors related to the issue of student recruitment, very few, if any, actually mentioned recruitment. Many students, graduates, and employers expressed concerns about the number of students in the major decreasing because of the fact that not all students are interested in an IT-heavy major. With the changes in the HIM profession and the resultant changes in the required AHIMA CEE curriculum competencies, the university's HIM program must move forward and include IT as a significant portion of the HIM curriculum. From student and graduate comments, it is clear that the new curriculum will not attract the same types of students as the old curriculum. Many current and former HIM students were interested in nursing but did not want to deal with the hands-on side of healthcare. These students were not always technology-focused or interested in IT. Respondents felt that these types of students would therefore not be interested in an IT-heavy HIM major. It is also clear, from program metrics, that enrollment in the HIM major has decreased significantly since the curriculum changes.

The HIM program must therefore work to recruit and attract a different type of student. AHIMA is working to get HIM classified as a STEM field. However, this process is not complete and may not be for several years. Therefore, the HIM program must find ways to recruit STEM students for the new HIM curriculum. Forays into new recruitment strategies are underway, and the HIM program director has been working with the chair of the school of IT on campuswide recruitment for IT-related majors. The HIM faculty are also working closely with the department's academic advisor to ensure recruitment of students with healthcare and IT interests.

In addition, further evaluation of this change as well as future curriculum changes should delve deeper into the changes' effects on students by gender, race, and ethnicity. Issues of equity, diversity, and inclusion should be considered in relation to both student recruitment and student retention.

Ongoing Evaluation of the HIM Program

The HIM field is in a time of great transition. The field has changed significantly because of the advent of electronic health records (EHRs). The need for IT skills to manage EHRs and for data analytic skills to use the data produced by EHRs has led to one of the most noteworthy changes in the HIM field to date. To provide appropriately educated and prepared HIM professionals for this changed field, HIM educational programs were required to implement the new AHIMA CEE curriculum competencies by fall 2017. However, the changes in the field are so great that AHIMA CEE released yet another set of curriculum competencies at the end of 2018. This HIM program is still implementing changes related to the last set of curriculum competencies, yet further changes are coming. This leads to the significance of the current study and the need for ongoing program evaluation.

One of the tenets of the new proposed curriculum competencies is that the competencies have more flexibility in their implementation to ensure that an educational program is meeting local needs. This study

provides valuable information regarding the needs of the HIM workforce in the HIM program's local and regional area. Continued study in this vein will therefore be an integral part of the HIM program's ability to meet curriculum competency requirements that serve the local area. Such study can also provide ongoing feedback on the perceptions regarding current and future curriculum changes. Further study may show, for example, that by removing one medical coding class, the program is no longer serving the local medical coding workforce needs. This could necessitate further changes to the curriculum to improve the program for involved stakeholders, including students, graduates, and employers.

CAHIIM requires annual surveys of students, graduates, and employers. Questions on the surveys that the HIM program uses for this purpose can be revised or new questions added to obtain deeper information about these groups' perceptions of the HIM program and the curriculum. Such information is particularly important after any curriculum changes. This information, coupled with program metrics and occasional interviews or focus groups, could easily provide data that could be used in an ongoing utilization-focused evaluation program designed to ensure ongoing improvement of the HIM program. When changes are based on such data, the program faculty can feel confident that the improvements are meaningful and will serve their stakeholders well.[3]

Implications and Action Plan for the HIM Educational Community
This evaluative study addresses many issues surrounding the latest CAHIIM curriculum competency requirements and the manner in which one HIM program implemented the required curriculum changes. While each program has the ability to implement the requirements in its own manner, similarities exist throughout the HIM educational community. HIM educational programs are likely to face similar challenges and elicit comparable support, concerns, and complaints from program stakeholders.

Evaluative Program Guide
This evaluative study provides an excellent guide for HIM program evaluation. While many HIM programs complete multiple program evaluation activities, frequently these activities are not used to implement meaningful programmatic improvements. By adopting a utilization-focused evaluation methodology in combination with evaluation capacity building, HIM programs can easily add to their existing program evaluation activities and build a meaningful evaluation program.

A utilization-focused evaluation framework is useful in such evaluations because it focuses on use of the findings to make positive changes in the program.[4] In conjunction with this, the concept of evaluation capacity building is helpful because it can ensure that the faculty, department chair, dean, and other stakeholders understand the evaluative process and are ready to use the results for positive change.[5] The combination of a utilization-focused evaluation framework and evaluation capacity building results in a higher likelihood that the results of an evaluative study will be used. Implementation of such a program evaluation methodology can provide an educational program with valuable data that can be used to make meaningful programmatic changes.

The latest AHIMA CEE curriculum competencies released in late 2018 focus on flexible implementation to meet local needs. With this in mind, program evaluation is needed now more than ever. HIM educational programs cannot truly understand their local workforce needs without input from their stakeholders, including students, graduates, and employers.

The current study outlines the use of multiple methods to collect useful and meaningful data from multiple sources. As noted, CAHIIM requires HIM programs to survey students, graduates, and

employers about the program. Revision of these surveys' questions or additions to these surveys can provide in-depth information about these groups' perceptions of the program, any recent curriculum changes, or any forthcoming changes. In addition to surveys, HIM programs are required to maintain a number of metrics. Objective measurements such as student retention, student completion rates, and RHIA examination pass rates can be used in conjunction with subjective data gathered through surveys to provide a more complete picture of the HIM program.

Depending on the focus of the evaluation, additional subjective data collection methods, such as focus groups and interviews, can be used. For example, if local workforce needs are the focus of the evaluation, additional data should be gathered from employers through one of these methods. These types of data allow a program to delve deeply into stakeholders' perceptions and get a true picture of the strengths and weaknesses of the program and curriculum.

Once data are collected, they can be analyzed through the methods outlined in this study. Quantitative data can be analyzed using basic descriptive statistics, while qualitative data can be analyzed through the constant comparative method.[6] This method allows for analysis through comparisons and contrasts that eventually lead to the identification of broad categories and major themes in the data. These categories and themes can then be triangulated with the quantitative data to allow for data verification and identification of all pertinent themes discovered in the evaluation.[7]

Use of Evaluation Results
HIM professionals and educators are familiar with the concept of relying on data and are accustomed to implementing quality improvements. Therefore, the evaluative study methodology should not be an unfamiliar concept, and faculty should be comfortable using data from such activities.

Evaluations such as those outlined in this study can provide invaluable information to individual HIM programs as well as to the profession as a whole. The results of an evaluative study can point to areas needing improvement and to areas in which a program is doing well.[8] Some results may lead to the need to delve deeper to determine sources of problems and potential improvements. Using a utilization-focused evaluation methodology helps to ensure that key stakeholders understand the data and the need for programmatic improvements that may be identified through the data.[9] This methodology provides additional support for implementation of changes for improvement.

Following changes and programmatic improvements, further evaluative monitoring should be completed to ensure that the changes resulted in true improvement.[10] This process provides for ongoing improvement based on data and input from a variety of sources.

Conclusion
With rapid changes in the HIM field and the resulting AHIMA CEE curriculum changes, HIM academic programs are challenged to ensure that requirements are met and that students are adequately prepared to enter the HIM field. Evaluative studies provide an excellent method to assess HIM academic programs' effectiveness in meeting their goals of CAHIIM accreditation and ensuring student preparedness. Anecdotal data and informal evaluation and assessment alone will not provide the depth of data needed for true evaluation of a program and for meaningful program improvement.[11]

One HIM educational program completed an evaluative study that resulted in valuable data regarding the HIM program, the effects of the recent curriculum change on the program, and student preparedness. The study findings were used not only for program evaluation but also for program

improvement. In addition, this study provides a model for future use in this HIM program as well as in other HIM academic programs. Through the use of such studies and ongoing programmatic improvement, HIM programs can ensure that they are meeting their goals and truly preparing students for the future of HIM.

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Notes

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