Capacity Preparatory Review Assessment Database Panel

1. Introduction

Western University of Health Sciences has six graduate programs that are professionally accredited in pharmacy, osteopathic medicine, nursing, physician assistant, physical therapy, and veterinary medicine. In addition, three new health programs, all with the intention of becoming professionally accredited, are planned for Fall 2009. The university as a whole is committed to regional accreditation with WASC. All seven to ten external peer reviews include inquiry into how well our students learn, and how effectively our programs/institution create learning improvement for students, as related to programmatic and institutional goals. As a result, it has been determined that an assessment data system is needed to meet the demand for assessment information.

Ten panel members comprising of faculty and administrators representing each WesternU college and university level administrators agreed to participate on the assessment database panel. Panel members actively discussed the need for an assessment database that would help programs acquire, exchange, and analyze assessment information more easily and efficiently. Although the university currently uses the Banner database system, members commented on the difficulty in retrieving information from the existing system. As a result of this difficulty, programs depend on their own databases or depend on technical assistance from university programmers, who often have a backlog of priorities to contend with, to access assessment data. The university purchased an additional module for the Banner database that will enable us to build a data warehouse for student assessment in the future. In addition, the WASC Quality Assurance panel will create a blueprint for graduate education program review in 2009, further prioritizing the need for readily available information on student learning.

II. Alignment with WASC

Criteria for Review (CFRs) 2.4, 2.5, 2.6 and 2.7 are related to this panel’s work. The assessment database outlined in this self-study will be designed to achieve the following functions: sharing and communication of assessment information, giving students feedback on their performance, allowing demonstration of graduate attainment of learning, and evaluation of student achievement of outcomes. Learning outcomes identified in this report indicate alignment with our institution’s purposes and character (CFR 1.2). Faculty participation and involvement in using and planning the database indicate evidence of CFR 3.11 on effective academic leadership to ensure academic quality. Institutional access to information resources sufficient in scope of our institutional purposes also is aligned with 3.6, and is part of the recommendations found in this report. As in CFR 4.3, we are planning the database described in this report be based on documenting evidence of student learning, using both quantitative and qualitative data. Once implemented, the database described should help track results over time, and between colleges (CFR 4.4). Planning processes found in this report also are aligned with our institution’s technological needs (CFR 4.2). Our database recommendations will empower faculty as end users to use evidence of teaching and learning for curriculum improvement (CFR 4.6). If utilized appropriately, the resultant data system should enhance the ability to transfer effective advances in learning from one college to another. And when applied to the design of curriculum, the data will enhance organizational learning (CFR 4.7).
III. Background, Outcomes, Context and Process

According to the National Center on Post Secondary Improvement, the keys for effective 'assessment policy models' should include the establishment of a clear purpose, the limitation of structures and mechanisms to allow flexibility, the embrace of simpler rather than complex reporting, the provision of data useful to institutional decision makers, and the emphasis on institutional improvement. Towards this goal, WesternU's proposed database seeks to be flexible to better meet our programs' assessment needs, so programs may find it useful, limit mechanisms that would inhibit innovation and increase assessment burden.

When discussing the database purposes, members articulated the importance of two database goals:

- provide learning evidence for external accreditation reporting, and
- predict individual student success in key assessment measures.

To help make informed decisions on what elements should be included in the database, panel members reviewed literature on health professions learning outcomes. The rationale was that in order to be relevant to our programs, shared learning outcomes were a logical starting point for our unique context as a primary graduate health professions institution.

The following health professional outcomes were identified as critical to graduate health professional education.

1. Critical Thinking and Clinical Reasoning
   The graduate should be able to identify and solve problems that require the integration of multiple contexts when applying patient care.

2. Diagnosis, Management and Prevention/ Clinical Competence
   The graduate should be able to perform diagnostic and therapeutic skills, to apply relevant information to patient care and practice, and to educate patients regarding prevention of common health problems.

3. Interpersonal and Effective Communication Skills
   The graduate should be able to effectively use interpersonal skills that enable them to establish and maintain therapeutic relationships with patients and other members of the health care team.

4. Collaboration Skills
   The graduate should be able to collaborate with clients and with other health professionals to develop a plan of care to achieve positive health outcomes for our patients.

5. Ethical and Moral Decision Making Skills
   The graduate should be able to perform the highest quality of care, governed by the ethical principles, integrity, honesty and compassion.

6. Life-long Learning
   The graduate should be able to engage in life-long, self-directed learning to validate continued competence in practice.
7. Using Evidence-Based Practice
The graduate should be able to utilize research and evidence based practice and apply relevant findings to the care of patients.

8. Humanistic Compassionate Care
The graduate should be able to carry out compassionate and humanistic approaches to health care delivery when interacting with patients, clients, and their families, and unfailingly advocate for patient needs.

By selecting a university assessment database utilizing these key eight outcomes, we seek to make the available database information as relevant as possible to our programs. However, within these eight key outcomes, there is clearly a need for programs to have flexibility in defining the elements included in each outcome. Our survey results of current assessment methods indicate each of the colleges measure each outcome in a variety of different ways. The outcome of humanistic and compassionate care is a component of ethical and moral decision making skills, and is aligned to our mission, 'to produce, in a humanistic tradition, health care professionals and biomedical knowledge that will enhance and extend the quality of life in our communities.' In addition, a WASC panel will submit findings in 2009 on how effectively we produce humanistic health professionals.

The committee invited an expert on assessment database development to present information on an example assessment database system. Dr. Julia Pet Armacost of the University of Central Florida reviewed a locally developed web based system where academic programs identified outcomes and reported at least two ways to measure each learning outcome. In this system, during each academic year, programs are planning for the following year’s assessment, collecting the current year’s assessment, and responding to last year's assessment, to improve student learning. The committee also listened to a separate presentation about a commercial data warehouse and analysis system offered to higher education institutions.

The committee concluded that to be useful, an assessment database should be able to 'drill down' to the level of individual student performance. The system should include longitudinal individual level data to help colleges and programs predict individual performance on critical outcomes such as passing licensure examinations through predictive modeling. These predictive models could better help identify students who require earlier support and interventions and improve passage rate on licensure examinations.

Of concern is whether or not the institution will be able to successfully sustain an integrated university-wide system if the colleges elect to implement their own assessment database systems designed specifically for the needs of their curriculum. If the university provides the overarching structure, will colleges utilize the tools provided? Without a college to college and college to university collaboration, key assessment information could be missed or duplicated, wasting both time and resources.

Defining whether the database should be centralized or decentralized; centrally guided; or a combination of the two, needs to be resolved with all the key stakeholders, such as those responsible for academic assessment, the Deans Council, Academic Affairs, and the Provost. For example, each program uses its own set of survey items using Course Eval™ to measure student evaluation
of courses and instructors, and to help measure a specific context of the individual program. In short, our programs may not value a university system if it does not adequately address an individual college’s assessment interests.

Watson and others (2007) describe a web based system locally developed by a college of medicine designed to be both a course management tool and portal to collect student assessment information and report results. They found their system to be specifically designed to meet the needs of their curricular goals, allowing for real time curriculum evaluation and improvement, and basing decisions on actual data as opposed to organizational politics (Watson et al, 2007).

There is clearly a need for programs to have flexibility in defining elements in the database that are based on their own curricular context. The system will need to be flexible enough to incorporate curriculum and assessment changes in the future. Our results indicate each college measures each outcome in different ways.

The College of Osteopathic Medicine of the Pacific, identified the need for readily available assessment information, and created a portal structure for faculty and staff to download course, test and grading information for analysis of specific student groups. The solution, called 'Academic Progress Portal' (APP), was implemented by the college's Chief Technology Officer through the use of freely available software. Two main indicators, examination pass rates and first choice of residency, are anticipated during its development. For now, APP integrates test and course grades and results into its structure, and, acts like a data warehouse and a business intelligence system. It has the ability to track information and gives faculty the ability to intervene before students fail a course. The most critical function allows faculty to track student academic progress not only within a course, but over their entire academic career at the college.

The university purchased a system to begin building a data warehouse for student assessment information that can synchronize with the current Banner system. This will improve the data reporting capability of the current transactional database system at the university. Planned implementation is scheduled for April 2008.

**Modifications from Proposal in 2005**

An area of strength in outcomes assessment is the development of standardized student surveys. The university collects a myriad of data that can be used for evaluation of the effectiveness of our degree programs and quality of campus services. Examples include First Year surveys, Graduating surveys, Orientation surveys, Alumni surveys, Faculty Workload surveys, and Special Themed ad hoc surveys. Multiple sources of data are currently available within colleges and departments, at different locations, or in a central repository. A university-level system will made these sources easily accessible to all, widely disseminated, partially customizable, and useful for tracking effectiveness of educational programs.

We have discovered a new insight since the Proposal was originally written. A student record database can include direct student assessment information, but is unlikely to include indirect assessment information, such as anonymous student evaluations and surveys, or institutional indicators such as results from Integrated Post-secondary Education Data System (IPEDS) data. The WASC Assessment Panel has focused its efforts to identifiable student information, and institutional performance indicators will be the charge of the Quality Assurance Panel. To be included in a longitudinal student
record database, information must be identifiable and be associated with one record per student. However, on a larger layer of the database, the institution could include student course and instructor evaluations, student preceptor and clinical site evaluations, survey results, and statistics found in the IPEDS database. Similar institutional statistics could be integrated into a different layer of the database design.

IV. Findings from a Best Practice Review

I) Outcomes

A wide variety of methods are available to assess health professional outcomes. To measure them effectively we will start with well-defined outcomes. Towards this goal, the panel created a ‘synthesis’ statement for each outcome listed, see Section III. By tabulating how frequently each outcome was mentioned in the literature reviewed, we were able to identify the most commonly mentioned outcomes across health professions education.

We also assessed ‘outcome’ relevance at Western University through interviews, a faculty survey and a syllabus review. Literature on creating a database for purposes of assessing outcomes of health professions was sparse. Instead, we reviewed literature on outcomes themselves, and separated the search of assessment databases practices. For further detail of the reports generated by each profession, please refer to Appendix X.

Additional outcomes mentioned in the literature that did not make up the top eight include the following:

- Serve as Health Advocates for Patients, Families, and Communities - graduates who serve as health advocates for patients, families, and communities when obtaining necessary services that will promote health awareness, wellness, and prevention education,
- Leadership Skills - graduates who establish a foundation in leadership to assume complex roles such as educator, administrator, health professional advocate, and advanced clinician,
- Participation in Professional Organizations - graduates who engage and participate in professional associations in order to advance knowledge and issues on contemporary practice, and
- Management of Emergency Situations - graduates who demonstrate competence in recognition and management of emergency situations in the absence of a physician.

It is conceivable that these outcomes could change in relative importance as the practice environment changes. Adapting the needs of health professional education to the practice external environment will be a critical impetus to create an assessment database system that readily adapts to change. The 8 outcomes identified in this report are not intended to be set indefinitely.

II) Database Best Practices

Database Structure

Best practices reviewed in the literature include limiting the number of outcomes and a focus on long term change. The progress of each outcome needs to be tracked and the information shared among appropriate constituents. Also, it is important to implement technology incrementally over time. Finally, ease of use of the data system is a critical pre-requisite.
Engagement

Best practices indicate the importance of creating an institutional group that will focus on improving the outcomes documented in the database. Also, the end user should be faculty, and they should be able to easily utilize, adapt and share data to lead curricular improvement. It would be desirable in our institutional setting that appropriate outcome information be exchangeable (or aggregated) between (among) the professional colleges.

V. Findings at WesternU

According to our analysis and review, there is institutional assessment and relevance of the 8 outcomes identified in the literature review. The content of the database should relate to the outcomes. An area of strength at the university has been the degree to which our graduates successfully pass licensing examinations to pursue careers in their chosen profession. Board examinations demonstrate clinical competency related to several domains, such as clinical reasoning. This could be incorporated into a student record system with information on what outcomes the licensing examination measures. Grades of capstone courses, national and state Board exam scores, and admissions and enrollment data, could be utilized in a student record system matched to the eight outcomes.

To evaluate the relevancy of the 8 identified outcomes to our institutional practices, academic panel members interviewed key individuals in each respective program to determine the types of assessment currently being conducted for each outcome; i.e. an assessment inventory. Additional information was acquired through a faculty survey which helped the panel members understand the frequency faculty assess and teach to each outcome. Lastly, for direct evidence, we randomly selected course numbers from 15% of each of the 6 health professional programs, and reviewed the syllabi sample for alignment to the 8 outcomes in course objectives, learning experiences and assessment activities. The three modes of measurement also helped prepare the institution for the next phase of reaccreditation, Educational Effectiveness Review. By triangulating evidence with surveys, syllabi and interviews, we seek to demonstrate an accurate representation of how relevant the 8 outcomes are as the basis for making decisions on the assessment database.

Survey Findings

Seventy percent of faculty invited to participate responded to the survey (N=129). A large percentage of faculty report the 8 outcomes are very important to their respective curriculum (69% - 94%) and to their individual course objectives (60% - 91%). A majority of the faculty reported that the eight outcomes align with learning activities (52% - 99%), individual faculty evaluations of student performance (54% - 94%), and program-level evaluation of student performance (62% - 88%). Certain outcomes resonate very highly with faculty, including Critical Thinking and Clinical Reasoning, Management, Prevention, Clinical Competence and Diagnosis, Interpersonal and Effective Communication Skills, and Ethical and Moral Decision Making Skills. Survey results indicate some gaps between frequency of individual faculty alignment to outcomes, and their perceptions of how frequently their respective programs align to outcomes. Overall, it appears faculty report programs accomplishing these tasks more frequently than their individual activity. Gaps were never greater than a 20% difference.
Interview Results

All of the colleges reported at least two ways to measure the following four outcomes, "Critical Thinking and Clinical Reasoning", “Management, Prevention”, “Clinical Competence and Diagnosis”, “Interpersonal and Effective Communication Skills”, and “Ethical and Moral Decision Making Skills”. In addition, four out of five colleges report using at least two direct measures and one indirect measure of the same four outcomes. Four out of five colleges report using performance tests in seven out of eight outcomes. The one exception is “Life-long Learning”, which understandably would be a challenge to translate into a performance test. In addition, each college reports at least one way to measure each of the 8 outcomes. Only one outcome, “Collaboration”, was not reported being assessed at one of the colleges. Interview results seem to indicate that the 8 outcomes, and especially the four mentioned above, are important areas to measure student learning.

Syllabi Results

The syllabi analysis of a random sample of 15% of each program's syllabi indicates that the 8 outcomes are relevant when reviewing learning objectives. We obtained 42 out of 44 syllabi. The 2 syllabi left out of the analysis were excluded because the courses no longer existed. Two outcomes out of eight were cited infrequently (5% - 25% of objectives, learning experiences or grading) in syllabi; Life-long Learning and Humanistic Compassionate Care. Only 9% of syllabi sampled included mention of the university’s mission, which references our humanistic tradition.

VI. Preparedness for Educational Effectiveness Review

In addition to determining the demand and use of assessment information for a university database, the panel activity also helped to prepare for the Educational Effectiveness Review by asking faculty and college assessment stakeholders how they appraise two outcomes; “Evidence Based Practice” and “Humanistic Care”. Two panels will evaluate how well the institution produces graduates who utilize both principles, and will generate assessment information. In addition, the syllabi review and survey results indicate some specific areas of strength and weakness to be consider during the Educational Effectiveness Review.

Areas of Strength

Interviews indicate a variety of assessment methods being used to measure outcomes with a substantial amount of direct evidence, including performance tests and direct observation. In addition, 80% of survey respondents agree they use multiple types of assessment strategies to evaluate each learning objective. More than 90% of respondents self-report a clear understanding of what learning objectives and outcomes are. Faculty report that they create learning objectives, use assessment information to improve teaching and the curriculum, provide frequent student feedback on levels of competency expected of students, use a reasonable set of specified outcomes, and align their learning objectives with program outcomes. Eighty-six percent of syllabi included learning objectives related to the identified outcomes common among health profession educating institutions.

Areas for Improvement

We found a wide variety of quality of course syllabi, from detailed and informative to ones lacking key elements. Professional development opportunities with
colleges on creating a syllabus would be helpful. The lack of relationship established to the university mission is a concern, and only 59% described the course’s relationship to the program.

The panel recommends initiating conversations with our programs’ curriculum committees on the following subjects: whether the co-curriculum is explicitly aligned with each outcome of the curriculum (30% did not know), whether program outcomes are explicitly aligned with university outcomes (27% did not know), and if national disciplinary standards were considered when developing and refining outcomes (25% did not know). Also, 26% disagreed that faculty in their program had agreed on explicit criteria to assess student mastery of each outcome.

VII. Conclusions on Assessment of Eight Outcomes

Overall, results indicate that the five colleges use a wide range of different assessment strategies to measure the eight outcomes. Interview data indicated that there was a range of assessment strategies focused on direct measures of students’ knowledge, skills, and values relating to these 8 outcomes, an identified strength. Additional indirect measures are used to ask students for their perspectives regarding the outcomes. For example, some programs conduct focus groups with students, alumni surveys, and request preceptor feedback. Interview data from all five Colleges provided evidence of measuring 8 outcomes. Surveys administered to the Colleges’ faculty indicate that all eight of the outcomes are assessed ‘Sometimes’, ‘Frequently’, or ‘Always’ within their curricula. Few faculty reported they are ‘Never’ assessed.

Though faculty think we are measuring the eight outcomes, syllabi evidence does not support it. When reviewing a sample of syllabi from each of the Colleges, syllabi did not reflect the level of assessment expected from the faculty survey results and college interviews. The inconsistency could identify a weakness in syllabi construction, but requires further investigation. What faculty state is being done in printed syllabi does not match with statements acquired in the surveys and interviews. This could be due to inaccurate syllabi, a potential problem of more serious implications, or the eight outcomes are not assessed as frequently as interview and survey responses would suggest. It may be that a 15% random sample of syllabi was not large enough to be representative of the full range of coursework. Further study is recommended to investigate to what degree programs actually assess the eight outcomes. Panel members have a ‘sense’ that both explanations are correct. Regardless of the concern about sample size, the syllabi review indicates that the 8 outcomes are not measured as frequently as expected. This dichotomy in data suggests a maturation opportunity for the institution. The syllabi review indicated consistent outcomes measurement of some of the objectives (typically cognitive outcomes and skills based outcomes), while affective outcomes (i.e. attitudinal and social outcomes) were least likely to be measured. As a result, it is the panel’s assessment that the institution is “emerging” in the area of outcomes assessment.

There is evidence that all five Colleges recognize the importance of student assessment activities. This is evidenced by a broad range of assessment strategies identified in interviews and surveys, including some exemplary syllabi. An overview of the different types of data collected from the five Colleges makes it clear that there are inconsistencies in how assessment data are collected and the quality of assessment data across the various outcomes. While some assessment activities were quite inspiring, some
of the assessment strategies employed by the Colleges were less than optimal. Professional development opportunities should also highlight innovative approaches to assess outcomes in the classroom.

From a University perspective, it was difficult to get a clear picture of strengths and weaknesses within each of the Colleges. The Panel recommends developing and establishing an assessment database built around the eight outcomes. A database built around the Academic Progress Portal at COMP would be an ideal solution to better gauge assessment of outcomes and student progress. This would assist programs in evaluating how well they are achieving outcomes and reflect what is being accomplished to assess learning in the classrooms. The database should focus on resolving the inconsistencies across the Colleges identified by the data reviewed and reported here. A University assessment database would also be instrumental in identifying and addressing strengths and weaknesses in the various Colleges and help develop priorities for further development of assessment tools.

In summary, the panel’s data provides a “murky” picture of outcomes assessment for the University. Questions concerning sample size, inconsistencies noted between evaluation methods, and inconsistencies of outcomes measurement techniques between colleges, suggest a developing culture in outcomes assessment. Our data supports consistent outcomes measurement of cognitive outcomes and skill based outcomes, while affective outcomes (i.e. attitudinal and social outcomes) were least likely to be measured. As a result, it is the panel’s assessment that the institution is “emerging” in the area of outcomes assessment.

VIII. Recommendations

Database Recommendations

A key issue for the panel is how to create a database system that would be relevant for each of our programs' needs. Based on reviewing the small amount of literature and examples of best practice combined with the results from the syllabi study, faculty surveys, and college interviews, the panel recommends the following:

1. The university system should be based on content related to the highly relevant eight outcomes identified in this report. The university should be prepared to integrate data collected in the future related to new efforts in Inter-professional Education, and student performance evaluations by the three new colleges of Podiatry, Dentistry and Optometry. The two key university outcomes of humanistic practitioners and evidence based practice should be proactively integrated for any new programmatic efforts.

2. The WesternU system should provide longitudinal, individual student data that can be aggregated within and across colleges. Each assessment in the database should be coded as to whether or not it measures any of the eight outcomes. Key assessments such as licensing examination results should be included, and will improve the utilization and dissemination of assessment information for decision making, planning, and effectiveness efforts. The upcoming Quality Assurance Panel can assist in recommending a specific process for reporting data effectively. To be useful, the database should be able to 'drill down' to the level of individual student performance, and should help colleges and programs predict
individual performance on critical outcomes such as passing licensure examinations. The development of a predictive model could help identify students who require earlier support, providing earlier interventions. This would also improve programs’ passage rate on licensure examinations.

3. By analyzing results of student groups in aggregate, the system could provide global analytics for decision making on curriculum and educational effectiveness. The key would be that such a system could support both college and university needs for information.

4. Create an institutional group that will focus on improving the learning outcomes analyzed from the database. This group could become an assessment community of practice recommended later (see #3 of Recommendations for Preparation of Educational Effectiveness) and part of the QA Panel recommendations.

5. Empower end users such as faculty and curriculum committees to inquire about student learning and investigate learning issues. An example of this model is College of Osteopathic Medicine of the Pacific’s Academic Progress Portal.

6. Design a protocol for the treatment of institutional data that is not designed for a student record system, such as anonymous surveys, IPEDS information, and student course and instructor evaluations. These institutional indicators of quality would necessitate a different database structure. We recommend the Quality Assurance Panel make recommendations for institutional indicators, collection, review and improvement, and a dissemination plan for communicating results for indicators that measure effectiveness, for both institutional and student databases.

7. The technical and budgetary solution for creating the database should be made by a group of key individuals, including: a representative of the upper administration well versed in institutional reporting needs, a member from the IT department, a member from OIR, the Chief Technology Officer of the medical college, one college Dean, a faculty member, a student, and the Registrar. Their charge is to recommend a technical and personnel solution for implementation of the Assessment Database Panel recommendations for the next fiscal year. Selecting members with various backgrounds and expertise in college curriculum needs, assessment, information systems and programming, and database management will enhance the solution.

8. According to Watson et al (2007), it took over two years to review commercial products for consideration for their web based assessment system. Because of the lack of integration possible between multiple different products, the college in this example opted to develop a locally grown system. Each of the 7 modules was then released sequentially on an annual basis. The complex project required a programmer, project owner and a team of key players involved, especially academic personnel involved with their curriculum. Based on this example, the panel recommends a consultant be hired to conduct a needs assessment for data reporting and implementation. A university database will take substantial time, adequate financial support and institutional engagement for successful implementation. The Panel recommends a realistic business plan for launching the new system and database.
Recommendations for Preparation for Educational Effectiveness

The activities of the panel also helped to prepare for educational effectiveness review, and some of our recommendations relate to this area.

1. Syllabi Development - Based on the review of syllabi, there is room for improvement. Some syllabi are exemplary models. The Panel recommends the institution offer workshops for faculty on designing and implementing syllabi. Currently, faculty who participate in the annual Academic Bootcamp (ABC) have the opportunity to create a syllabus. So far, 63 faculty have participated in 3 university-offered ABCs, and another 24 faculty have participated in 2 College of Pharmacy ABCs.
2. Development of Assessment of Affective and Social Skills - Based on the results from surveys, interviews and syllabi, faculty are not assessing ethical reasoning, humanistic care, collaboration, and life-long learning as frequently as other domains. Future faculty professional development opportunities should assist with the development of assessment in these areas. Plans for Inter-professional Education currently being developed at the university will also help assess these areas. Also, one WASC panel will be assessing how well we produce humanistic practitioners for the Educational Effectiveness Review, so further recommendations will be made at the time their report is completed in 2009.
3. Community of Practice - The Panel recommends that each college share assessment best practices with each other, possibly in a community of practice, and incorporate assessment innovations that would improve educational effectiveness in all of our programs. This group could also be a collaborative partner with the database design group.
4. Humanistic Care Assessment - A panel will investigate this outcome for the WASC report due in 2009. Syllabi evidence infers this outcome is weakly assessed, and assuming that syllabi accurately reflect what is being assessed. Given its importance to the university mission, improvement in assessment practices in humanistic care is recommended. As for Evidence Based Practice, another panel will investigate this outcome for the WASC report due in 2009. According to our results, it is currently more frequently assessed than humanistic care related outcomes.

VIII. Future Challenges

The literature and reports from other institutions would indicate that there are substantial costs associated with implementing a new database system for assessment, with substantial hidden costs (Watson et al, 2007). Careful planning using a business systems approach will help implement a successful solution. Accurate estimated predicted costs and careful budgetary support will be needed for the new system to be successful, as well as intense collaboration with the academic players in each program involved with assessment during planning and implementation. Too many IT projects become overly complex, cumbersome and expensive, so starting with a simple solution for what is needed most would be best to avoid these pitfalls.

We also found a lack of published literature on the topic of creating assessment databases, especially for health professional education. We recommend that the panel
members consider publishing their activity in the future to assist with development and growth of the field.
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