March 7-10, 2022

Professionalism in Practice

The University of Mississippi Medical Center

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EXECUTIVE SUMMARY

I. The UMMC Quality Enhancement Plan (QEP), entitled “Professionalism in Practice,” is designed to enhance student learning by actively promoting the development of professionalism in our experiential practitioner curriculum, by focusing on the clinical and scientific learning environments. This QEP expands on the emphasis on professionalism that exists in our didactic curriculum from our first QEP, “Professionalism across the Curriculum.” The selection and development of our topic was guided by an institutional process spanning three years, involving a thorough examination of institutional assessment data produced through our comprehensive planning and evaluation processes, the broad-based participation and collaboration of all college constituencies, and a thorough analysis of relevant research.

II. The goal is to benefit our students and the health care and scientific fields they are entering by producing graduates with high levels of professionalism in knowledge, behavior, virtue, and identity. The Professionalism in Practice program has identified three desired student learning outcomes:
   i. Students will behave in a consistently acceptable professional manner during clinical and scientific learning rotations.
   ii. Students will express virtues associated with professionalism during their clinical and scientific learning rotations.
   iii. Students will internalize a professional during their clinical and scientific learning rotations.

III. To determine which instructional strategies best promote these professionalism outcomes, we have designed Professionalism in Practice as a comparative study of the effects of five different stacked combinations of teaching methods. Based on a comprehensive review of the research and best practices literature (over 500 sources), we will take students from every relevant program who are beginning their first year of experiential training (clinical and laboratory rotations) and randomly assign them to one of four educational groups (approximately 1100 students per year for four years). All these groups will be compared to each other and the baseline control group (established during the first year of the four-year program). The baseline control group will experience only the existing didactic curriculum. Groups 1-4 will experience the progressive addition of four other pedagogical interventions: a specific learning module on professionalism, a set of professionalism evaluation tasks appraising self and supervisors, a collection of written reflection tasks, and guided group reflections. Thus, all groups will undergo the existing didactic training, the learning module will be added for Group 1; the module and evaluation tasks will be added to the didactic training for Group 2; the didactic, module, evaluations, and writing reflections for Group 3; and Group 4 will have all those tasks plus the guided group reflections. We aim to determine whether these pedagogical tasks or their progressive combinations effectively produce greater professionalism.

IV. To assess the effects of the instructional interventions, all student participants will be tested using a panel of established instruments that include direct, indirect, quantitative, qualitative, self-reported, other-reported, pre-test, and post-test measures. These instruments will assess students’ professional behaviors, virtues, and identity.

V. The QEP will provide a significant and valuable contribution to the mission of UMMC, improving the health and well-being of patients and the community through excellent training for health care professionals, engaging in innovative research, and the delivering of state-of-the-art health care by giving us the information to determine the best curriculum for UMMC students and also providing data from this innovative research that other universities may use to promote professionalism. The institution has committed the resources to fully implement the Professionalism in Practice QEP.
Professionalism in Practice

High standards of ethics, knowledge, skill, reliability, communication, and collaboration are directly related to the treatment of patients, the veracity of scientific data, and the disposition of public health policy. These traits encompass the ideals of professionalism expected at the bench side or bedside. Unfortunately, the data at large shows that violations of professionalism are not uncommon. Unprofessionalism at the trainee level is strongly correlated with unprofessionalism at the practitioner level, and the best ways to teach and assess professionalism are notoriously difficult to pin down. At UMMC, recent data gathered at the medical residency level shows that 65% of residency directors said that lapses of professionalism occurred in between 20% and 60% of their residents. Additionally, 44% said that professionalism lapses had increased during the COVID pandemic, and approximately 40% of residency directors said they spend at least 1/5th of their time dealing with professionalism lapses.

The problem we have identified centers around the concept of professionalism in clinical and scientific learning environments. Professionalism refers to an individual’s adherence to the accepted standards of skill, conduct, attitudes, and goals of a particular area of professional activity. As an institution with a mission to educate and train health care practitioners and scientists, UMMC is interested in producing graduates with high levels of professionalism in those areas.

Ultimately, what we want from health care practitioners and scientists is quality patient care. The literature suggests that quality patient care results from a combination of practitioner knowledge and professional behavior. UMMC’s didactic and experiential curriculum strongly reinforces the knowledge and skills to be a quality health care provider or skilled scientist. Our first QEP focused on adding professionalism topics to the didactic curriculum, and now with QEP 2, we want to focus on professionalism in the clinical and scientific learning environments.

As an institution, it is important to have teaching professionals and mentors that exemplify professionalism in all situations. We have managerial systems in place to promote the professionalism of our workforce; however, students need to be able to appraise the level of professionalism exhibited by colleagues and mentors to be able to guide their own journey as a professional. It is possible that a student may experience academic hazing or bullying on an experiential rotation. There may also be times when unprofessional behavior is exhibited. In those instances, we hope students are aware of the inappropriate behavior and know how to appropriately address and/or report the behavior as necessary.

In this vein, we hope to train the student about qualities that compose professionalism. The literature review indicates professionalism includes four domains: knowledge, habitual behaviors, virtues, and identity. Figure 1 illustrates how professionalism consists of the knowledge, behavior, virtues, and identity of an agent, which in this case is our students.

Figure 1. Professionalism Model
Agents of professionalism
A good professional is someone who has the requisite professional knowledge, has developed habits of professional behavior, has developed the virtues that promote professionalism, and has created a sense of professional identity. Our previous QEP is ongoing and focuses on building knowledge related to professionalism in the didactic curriculum. UMMC data show that residency directors identified the primary reason for professionalism lapses as the character traits of attitudes and virtues. The problems of knowledge was not mentioned. It is important then to conceive of our students as agents who are not merely repositories of knowledge but who are agents with behavioral habits, virtues (attitudes and character strengths), and a sense of professional identity. All of contribute, ultimately, to the production of professional behavior.

By focusing on teaching our students how to appraise professional behavior of themselves and colleagues in different learning environments, we give them the critical skills to decide which attributes they want to emulate or disregard. As a result, our QEP focuses on developing professionalism whereby a student can make informed decisions regarding professionalism in any environment.

Focusing on the agent, then, we have the ability to affect (to greater or lesser degrees) knowledge, behaviors, virtues, and identity of learners.

**BROAD-BASED SUPPORT OF TOPIC**

UMMC chose the Professionalism in Practice topic by conducting a thorough review of institutional data with a wide range of constituents to identify key issues emerging from institutional assessment for the QEP. The broad-based involvement of our topic selection can be seen in the diversity of institutional data sources used in the selection process as well as the representative communities in the QEP steering committee. As our students constitute a large portion of the health care providers and scientists in our state, it is of dire importance that our students are successful professionals.

**Institutional Processes**

UMMC 2021 5-year Strategic Plan (delayed from a 2020 publication due to COVID interruptions)

As part of our ongoing, comprehensive planning and evaluation process, UMMC released a 5-year strategic plan in 2021. Using institutional data, the planning team explicitly included professionalism as a major element of the university’s development strategy. Element #4 of 5 strategic elements states: “Positioning academic programs for the next generation of learners.” One of the implementation steps in achieving success with the academic programs is to “build on the work we’ve done on promoting a culture of professionalism to expand that work in the clinical setting.” The broad involvement of constituencies involved in the strategic planning process is outlined thoroughly in Standard 7.1 of the Compliance Certification Report.

**Initial QEP Development Planning**

The QEP process began in full in September of 2018 by recruiting a coordinator of QEP development efforts who began gathering information on QEP requirements, meeting with various administrative offices, outlining tasks and timelines, joining and conferring with the Clinical Learning Environment Committee (which had been recently created and tasked with examining clinical education assessment), and organizing the process of forming a QEP Steering Committee.

**Formation of the QEP Steering Committee (QEP-SC)**

The QEP-SC was created in July 2020, after canvassing the deans of each of the six schools of UMMC, the president and cabinet of the Associated Student Body (ASB), the Office of Academic Effectiveness, and the Center for Bioethics and Medical Humanities for recommendations for members. The goal was to include a broad-based involvement of institutional constituencies that represented all stakeholder cohorts. The committee was composed of members from every school. Key stakeholders included students,
faculty, administrators, staff, parents of students, and alumni. New student members were added as existing student members graduated. The initial composition of the Steering Committee resulted in 40 members. As new members were added for their specific expertise and perspective and graduating or retiring members were replaced, the final composition of the QEP-SC was 52 members. A total of 24 students have served on the QEP-SC. For a description of the specific chronologically organized actions of the QEP Steering Committee, see Appendix 1.

**Institutional Needs Emerging from Assessment**

**QEP 1: Professionalism across the Curriculum**

UMMC’s previous QEP (Professionalism across the Curriculum: Reaffirmation of a Core Value) focused on four learning domains within professionalism as defined by active adherence to the norms, values, and ethical standards of one’s professional community. Those four learning domains were centered in the didactic curriculum and included: improved knowledge of the ethical principles underlying healthcare practice and research; improved student communication with faculty, staff, peers, and patients; greater empathy during professional interactions; and improved moral reasoning skills. While there were positive results from this QEP, only one context of professionalism was taught – professionalism in the classroom setting. The experiential (clinical and scientific) training environment was not directly addressed.

It is crucial to recognize that for an academic health science center, the translation of didactic learning into application is paramount. As one of the members of the QEP Steering Committee stated, “We as educators want the theory we teach them in the classroom to get expressed in the clinical environment.” While classroom knowledge and reasoning and communication skills may be foundational, ultimately, the hallmark of success is applied professional behavior.

The overall measure of professionalism used for our first QEP was the Professional Assessment Tool (PAT). The PAT indicated that as students moved from their classroom years to their clinical training years, the percentage of students scoring poorly increased from the 1%-5% range to the 10%-13% range. Academic dismissal data also showed that during the 2015-2020 academic years, while only two students were dismissed for unprofessional behavior during their didactic years (across the Schools of Dentistry, Medicine, and Nursing), 56 students were dismissed for unprofessional behavior during their clinical training years. For the full satisfaction of our institution’s educational mission, then, it is necessary for us to focus on the enormously important transition phase of education that students are in as they move from didactic learning to experiential learning. That experiential learning environment (for not only healthcare students but laboratory students as well, who were not included in the previous QEP) is governed by a different set of dynamics than the classroom.

As the 5-year impact report of our first QEP stated, “It is clear that modeling unprofessional behavior or even failing to emphasize the importance of professionalism in the clinical training environment degrades the efficacy of professionalism training in the pre-clinical years. Most professional health care training programs are at risk for this problem because of their dichotomous nature consisting of pre-clinical or basic science training followed by experiential learning in real-world clinical training environments. As a direct result of our QEP, UMMC is positioned to build on its experience and deploy Professionalism Across the Curriculum 2.0.” The results of the previous QEP thus highlighted that the didactic environment, though important, is very different from the experiential training environment and we cannot assume didactic education translates easily to the “real-world” clinical or laboratory training context. In that sense, our current QEP is both very different from the prior QEP but is also the completion of it in terms of our full educational mission.
Clinical Learning Environment Committee
The Clinical Learning Environment Committee (CLEC) was created in 2019 and charged to review existing assessment data regarding the clinical learning environment for all learners and faculty; identify gaps in that assessment data and determine how to obtain that information; identify persons, offices, and/or departments with specific responsibilities within the clinical learning environment; disseminate the assessment information to those groups for appropriate action; foster an interprofessional collaboration by working with appropriate institutional and school committees to track outcome data from these actions; provide recommendations on areas for improvement and share best practices in education, patient care, and professionalism when identified; and serve as a consultative group when planning reorganizations of clinical work flow and/or new services, especially those involving multiple learners. Membership of this committee included the chief executive officer of UMMC’s adult hospital, clinicians in multiple health care fields, scientists, faculty members, academic staff, and students.

The CLEC convened to analyze the UMMC clinical learning environment and make recommendations for quality assessment of this unique educational atmosphere. The committee divided into three subcommittees to review existing data for assessment and attention to the three key domains—learner development, professionalism, and patient care in the clinical learning environment. Regarding professionalism, the CLEC found that the institution does not have an all-inclusive system in place for monitoring or assessing professionalism in the clinical learning environment, even though some schools, programs and/or organizations are doing an outstanding job individually. The CLEC recommended that the institution should task a single authority to be ultimately responsible for professionalism in the clinical learning environment. The CLEC also specifically recommended that UMMC’s next Quality Enhancement Plan focus on the assessment of professionalism in the clinical learning environment. In order to coordinate the relevant overlapping aims of the committees, the Chair of the QEP-SC also became a member of the CLEC and has been thoroughly involved with its work.

Student Satisfaction Survey Data
The CLEC introduced a panel of questions regarding student satisfaction within the clinical learning environment. From the results, the two prompts with a standard deviation greater than 1 were “I am satisfied with the quality of feedback after assignments in the clinical learning environment” and “I feel that I can ask questions or raise concerns without fear of repercussions in the clinical learning environment.” One statement, “I am satisfied with the professional behaviors and attitudes of supervisors when providing direction and constructive feedback in the clinical learning environment,” had a standard deviation of 0.98. These three prompts pointed to varied student experiences depending on the student’s program. The highest student response on the student satisfaction survey related to the clinical learning environment was 4.37 out of 5 for the prompt: “the training I received in the clinical learning environment taught me to conduct myself as a professional.”

Programmatic Accreditation Standards related to Professionalism
As several programmatic accreditors focus heavily on the development of clinical practitioners as professionals, Liaison Council on Medical Education (LCME), Accreditation Council for Graduate Medical Education (ACGME), Joint Review Committee on Education in Radiologic Technology (JRCERT), Accreditation Council for Occupational Therapy Education (ACOTE), the Commission on Collegiate Nursing Education (CCNE) and other UMMC programmatic accreditors, UMMC recognizes that professionalism must be integrated into our didactic and experiential learning environments.

General Education Competency Assessment
One of the general education competencies assessed by undergraduate programs at UMMC is professionalism. An institutional rubric for professionalism was established in the summer of 2019 and assessed. While the scores for this assessment appear strong, the performance of students is largely captured from the time in the didactic portion of the program’s course work. Professionalism in the
clinical or scientific learning environments is not specifically measured in the general education competency assessment.

Student Focus Group Data
Two facilitated student focus groups comprising students from the School of Dentistry (SOD), School of Graduate Studies in Health Sciences (SGSHS), School of Health-Related Professions (SHRP), School of Medicine (SOM), School of Nursing (SON), School of Population Health (SOPH), and the University of Mississippi’s School of Pharmacy (SOP)—which is housed on our campus for clinical and experiential learning—were conducted. All students were asked whether they thought professionalism in the clinical/practitioner learning environment would be an appropriate and valuable topic and what they thought the major issues were with the current clinical/practitioner learning environment. The conversation developed naturally in a way that lends itself to be summarized in two areas: (1) the main problems with the current clinical/practitioner learning environment and (2) the improvements/changes students would like to see.

Students identified the following as the main problems related to professionalism:

a. Inattention to “soft skills” related to professionalism (The term “wellness” was also used to indicate a lack of attention to non-technical and non-informational skills such as communication skills, time-management, emotional regulation, financial management, and self-care.),

b. Inconsistency of experience across instructors (Students perceived that the quality of the clinical experience depends not on the system or program but almost entirely on the personality of individual supervisors, with some caring a lot about teaching and others caring little.),

c. Inconsistency of use of student evaluations and feedback (Students reported considerable variation in how schools obtain feedback and how or whether the feedback is used to improve programs.), and

d. Inefficiency of formative evaluations (Students perceived the system of formative evaluations as good in theory but useless in practice and not taken seriously.)

Students identified these topics for improvement:

a. Increased patient interaction,

b. Better communication,

c. Clear learning goals,

d. Better quality control over clinical supervisors,

e. Clear indications of student evaluation usefulness, and

f. Increased attention to soft skills related to professionalism.

National/International Education Data Literature Review
A survey of the literature on professionalism was conducted with the goal of determining the importance of the concept and the nature of the problems associated with its promotion. The results of that literature review are given in greater detail in Appendix 2. Briefly, however, the review showed a strong emphasis on the “hidden curriculum” of healthcare training. The “hidden curriculum” is the set of informal, often unarticulated, and even unintentional ways in which skills, information, professional behaviors, expectations, attitudes, values, and ethics are taught. By way of explicit statements, implicit judgments, facial expressions, modeled behaviors, and evaluation comments, the hidden curriculum either adds to, reinforces, or conflicts with what students learn in their didactic and pre-clinical experiential coursework. Numerous studies indicate that problems occur as students transition from their formal curriculum to their clinical curriculum with all its hidden components, including a decline in empathy, moral reasoning and professionalism regression, low confidence in dealing with ethical and professionalism issues, internal conflicts between idealized and real-world medicine, medical hierarchies and denigrating general practice, predicting professional lapses in residency and practice.
The research also noted the significant effect of provider burnout on professionalism. This initial research confirmed that the topic of professionalism was germane and significant.

**Topic Justification Document**

All this information was compiled and summarized in a 36-page document and sent to all QEP-SC members on November 4, 2020. The committee then met on November 11, 2020, to discuss the topic related to professionalism and poll the group as to any other potential topics. The committee was enthusiastically supportive of the topic of improving professionalism training in the clinical/practitioner context, and no other topics were proposed. The committee voted unanimously to choose Professionalism in Practice as the QEP and recommended to the SACSCOC Leadership Committee that this topic be adopted. The leadership committee also unanimously affirmed the choice of this topic.

**FOCUS OF THE PLAN**

Student qualitative feedback and our literature review suggests a gap in student’s perceived level of professionalism from the classroom trainings to the experience in the clinical and scientific learning environments.

**Student Learning Outcomes**

The student learning outcomes selected for the program align with the professionalism model introduced in Figure 1 that notes professionalism is a compilation of the knowledge, behavior, virtues, and identity of an agent (student). Since our previous QEP focused on the knowledge of professionalism in the didactic curriculum, the learning outcomes in the Professionalism in Practice QEP align with the behavior, virtues, and identity of students. As these elements go beyond general cognitive knowledge of the concepts, we used Krahtwohl’s taxonomy of the affective domain to capture the elements of learning needed to show success in the QEP. The identified outcomes include:

1. **Behavior** - Students will behave in a consistently acceptable professional manner during clinical and scientific learning rotations.
2. **Virtues** - Students will express virtues associated with professionalism during clinical and scientific learning rotations.
3. **Identity** - Students will internalize a professional identity during clinical and scientific learning rotations.

**Background of the QEP’s Focus**

UMMC aims to maintain and promote professionalism in experiential training, to mitigate any potential deleterious effects that the hidden curriculum of experiential/practitioner training may have on the development and preservation of professionalism among students, and, potentially, how to magnify the beneficial effects of the hidden curriculum.

The hidden curriculum is the informal set of values and practices learned in experiential training through role modeling and habit development. In both UMMC’s data and widely represented in the research literature, the hidden curriculum tends to be strongly constitutive of a student’s professional values and habits and can undermine or strengthen the more idealistic standards and values learned in didactic teaching. This inconsistency in student experiences from one practitioner to another or from one event to the next tends to strongly depend on the vagaries of supervisor assignment as opposed to structural elements of the curriculum and tends to predict lapses of professionalism in the future.

Our approach focuses on the **learning** of professionalism in clinical and scientific learning environments utilizing a student-centered approach. This approach includes programs that explain professionalism, explains the issues of the influence of the “hidden curriculum” on developing professionalism, trains
students in reflective and metacognitive methods that best develop and promote professionalism, and sets up a support network for students in sharing experiences and techniques for learning professionalism.

UMMC established professionalism training across our didactic curriculum during our previous QEP. Our aim now is to teach our students how to appraise professionalism when they move from the didactic curriculum to the practitioner curriculum so we can better preserve professionalism across the many new learning experiences students encounter. With the Professionalism in Practice QEP, we will not only be working with a more identifiable and manageable population but will ideally be providing students with what they need – an understanding of professionalism, a metacognitive skill for identifying professionalism, and the reflective habits for inculcating professionalism across many situations. Essentially, the idea is to give students a set of attitudes and skills that they can carry into new clinical and scientific learning environments that will help them identify, retain, and exemplify professionalism.

Methodological Design
Since we do not know, and it is not settled in the literature, which teaching methods are most effective in producing these professionalism–promoting attitudes and skills in students, our QEP will need to engage in educational research, testing out which pedagogical interventions have the best effects on professionalism and which combination of interventions are the most efficient in terms of curricular time and tasks.

It is important to engage in this research because positive results, even small ones, given the difficult nature of codifying professionalism and the tenacious effects of the hidden curriculum could suggest permanent changes to our curriculum. Given the density of demands the curriculum already has in place for healthcare and scientific training, faculty need to know how well teaching methods work and whether they pass a law-of-diminishing-returns test.

Our overall QEP goal, therefore, is to experiment with different pedagogical interventions to determine the optimum type and degree of curricular investment for promoting professionalism as seen in Figure 2.

![Figure 2. Instructional Design Approach](image-url)

Each of the five instructional methods will be tested as to the impact on student’s professionalism exhibited in the clinical and scientific learning environments.

Our literature review and analysis identified five instructional methods by which we could impact professionalism in the clinical and scientific learning environments as seen in Figure 2: didactic curriculum on the aspects of professionalism, education modules on the psychological and moral forces
affecting professionalism in experiential training in the taught and hidden curricula, behavioral ratings, written reflections, and group reflections.

**DID: standard didactic training (an information learning activity)**

This learning method is not new to UMMC’s plan. It is in the extant explicit curriculum from our previous QEP. We will continue to use this learning method as the baseline for what students already receive. We are interested in whether the other interventions focused within the experiential and hidden curriculum make a difference in professionalism over what we already do.

**MOD: online learning module (an information learning activity)**

This intervention will be an online learning module about professionalism that includes information about the effects of the hidden curriculum, information on what professionalism comprises and how it is assessed, and information on self-care and avoiding burnout. It may also include videos of professionalism simulations. This module will be based on the literature review and will be designed in detail during the first year of the QEP, when baselines are being determined. The intention is to prime students to be aware of the hidden curriculum, better discern what messages and behavioral incentives they are receiving and understand the standards on which they are being judged. This online module will train students how to identify the psychological and moral forces that affect professionalism in experiential training, in both the taught and hidden curriculum. Students will also be trained on how to appraise their own professional behavior and the behavior of their mentors.

**EVAL: pedagogical evaluation exercises (an information application activity)**

Students will evaluate their own behaviors and the behaviors of their supervisors. This is a cognitive training activity in which students are repeatedly required to assess professionalism in themselves and others, with the expectation that such repeated tasks increase awareness of and sensitivity to choices about professionalism and ultimately result in increased habitual professional behavior. The evaluation exercise will be a task in which students evaluate themselves and their supervisors using the same assessment tool supervisors use to evaluate students – the professionalism assessment tool (PAT). Evaluations will take place after each experiential training rotation, which will vary depending on the program. The intention is to prime students to pay more attention to, and to better analyze situations, events, and behaviors relating to professionalism. It also makes the standards on which they themselves are judged explicit. The evaluations students fill out will be checked to make certain they were completed and a small random sample will examined to determine how seriously students are taking the task, but each evaluation will not be examined. The evaluations of supervisors will not be provided to supervisors in order to ensure students repercussion-free anonymity. The goal for the QEP is to determine whether self-evaluations and evaluations of supervisors helps promote professionalism as measured by our assessment tools, not to gather information from the evaluations themselves. However, the data from the evaluations will be made available to certain other UMMC offices and committees for purposes of quality control, faculty development, and general clinical/practitioner environment assessment and improvement. In this way, the QEP will have the added benefit of providing data that may be useful to UMMC for institutional effectiveness purposes.

**WREF: written reflection exercises (an individual reflective activity)**

Written reflections require students to formally reflect on their experiential training by writing reflections in response to prompts that ask them to identify experiences where they witnessed or were engaged in both good and bad expressions of professionalism. This is a meta-cognitive training activity that requires students to identify not only external facts of a situation but internal facts of their own emotions, reactions, judgments, and attitudes with the hope that repeated reflective tasks give
students greater insight into the environment and their own agency ultimately improving their professional behavior.

Formal, prompted written reflection of practitioner experiences including an analysis of professional behaviors, observed and an analysis of unprofessional behaviors observed and how the student dealt with them (approximately 500 words for each reflection). Reflections will not be linked to students and instructions will require that no names or identifying information be used in the reflection. The intention is to use this process to have students to think about, report on, and analyze situations involving professionalism and their own thought processes and behaviors. The expectation is to improve awareness of and critical approach to professionalism. Reflection will also require students to deal directly with an “at the bedside” situation (for clinical students, and for laboratory students an “at the bench side” situation). The reflections students write will be checked to make certain they were completed and a small random sample will examined to determine how seriously students are taking the task, but each reflection will not be examined for the purposes of the QEP. The goal for the QEP is to determine whether writing reflections on professionalism experiences helps promote professionalism as measured by our assessment tools, not to gather information from the reflections themselves. However, the reflections will be made available to certain other UMMC offices and committees for purposes of quality control, faculty development, and general clinical/practitioner environment assessment and improvement. In this way, the QEP will have the added benefit of providing data that may be useful to UMMC for institutional effectiveness purposes.

**GREF: guided group reflection exercises (a reflective social activity)**

Through group discussion reflections, students will formally reflect on their experiential training by talking with others about experiences where they witnessed or were engaged in both good and bad expressions of professionalism. This is a meta-cognitive training activity requiring students to identify the same aspects of situations as the writing reflections do, but also to interact with others’ experiences and stories in ways that engage the more social aspects of professionalism conflicts, generating experiences of empathy, sympathy, judgment, confusion, clarity, and a sense of shared struggles and shared accomplishments. The expectation is that repeated reflective tasks give them greater insight into the environment and their own agency, and a greater sense of community, ultimately improving their professional behavior. This activity will be a formal, guided group discussion reflection of practitioner or scientist experiences including analysis of professional and unprofessional behaviors observed and how the student dealt with them (approximately 1 hour). Approximately 100 students will be randomly assigned to engage in these interprofessional guided group reflections with 10 groups of 10 students each. The intention is to use this process to get students to think about, report on, and analyze situations involving professionalism and their thought processes and behaviors, which should improve their awareness of and critical approach to professionalism. This is the only social-interaction type of intervention studied. Each session will be summarized by the facilitator in a way similar to focus groups, but no students will be identified and students will be asked not to share any identifying information regarding the people or situations they discuss. As with the WREF data, students will not be assessed on the quality of their engagement in this discussion. The goal for the QEP is to determine whether guided group reflections on professionalism experiences helps promote professionalism as measured by our assessment tools, not to gather information from the reflections themselves. However, the summaries of the reflections will be made available to certain other UMMC offices and committees for purposes of quality control, faculty development, and general clinical/practitioner environment assessment and improvement. In this way, the QEP will have the added benefit of providing data that may be useful to UMMC for institutional effectiveness purposes.
Activities Improving Student Learning in the Clinical and Scientific Learning Environment

Though each of the learning methodologies show promise in the literature and in our experience, we do not know which combination of these strategies works the best in improving student learning in the clinical and scientific learning environment.

One goal of the QEP then, is to test these strategies, to determine which, if any, of the learning strategies work best. The institutional knowledge gained by this educational research will help inform faculty members understand how to best reinforce learning in the clinical and scientific learning environment.

Instructional Methodology – “Build On” Model

The design divides students into four groups, each of which will have an additional strategy added to their learning to see if the additions strengthen professionalism on our battery of assessments. One group will just have the existing didactic training. A second group will have the didactic training plus the additional special professionalism education. A third group will have the didactic training, the special professionalism education, plus the behavioral task evaluations, and so on. Once we have the answer to the question of what works, then we will be a much better position to know how to change our experiential learning curriculum. The rest of this document explains how we came to choose this topic and how we plan to answer the question of what works best.

Each of the types of interventions described above involve a differing level of investment of time and attention with the existing DID requiring the most. We want to determine if adding other types of interventions will make a significant difference in our outcome measures of professionalism which is described later. We call this the build-on model. The proposal is that we have four groups of students that will undergo different sets of interventions plus a control group. The four groups will be assigned from the population of students across all programs who are entering their first year of major experiential training (e.g., for medical students, this would be the M3 year, for laboratory students it would be the first-year rotations, for dental students their fourth year, for nursing students their second year). The first year of the four-year study will count as our baseline/control group (students going through existing DID programs but being evaluated with our new battery of professionalism assessments). The second, third, and fourth year will have experiential learning students randomly assigned to one of four intervention groups, each of which builds on the intervention assigned to the prior group.

**Intervention Groups**

Figures 3 and 4 demonstrate the instructional activities associated with each intervention group. In year one, students will continue participation in the didactic instruction related to professionalism. During this first year, we will conduct the first round of pre- and post-test assessments to establish a baseline of professionalism in the clinical and scientific learning environments.

**Figure 3. Intervention Group Design Year 1**
In years 2-5 of the QEP, students will be assigned to various groups each participating in a different level of the “Build-On” Model demonstrated in Figure 4.

Figure 4. Intervention Group Design Years 2-5

The overall goal is to determine whether and how professionalism is affected by these different cumulative combinations of interventions. Each group represents a greater investment in time, energy, and number of tasks. This tiered approach will allow us to examine the relationship between the degree of intervention and the resulting level of professionalism with an eye toward permanently altering our experiential curriculum. We want to find the optimum return-on-investment and use that information to improve our curriculum which is the goal of all assessment and quality research. For instance, if Group 3 performed substantially better on professionalism assessment measures than Group 2, then it might be worth adding MOD and EVAL tasks for all students who all already experience DID. However, if Group 4 only scored slightly higher on assessments than Group 3, then it would probably not be worth the labor and time to add WREF to the curriculum long term.

Given that there is no universally agreed-upon evidence-based set of best practices for teaching professionalism, the Build-On Model best suits the needs and resources of UMMC. It balances the need to evaluate which pedagogical interventions make a difference with the need to see which interventions produce enough of a return-on-investment to be considered for future curricular change. This model also recognizes the need for reasonable accommodations to management and logistical realities and works with the existing curriculum, promising to build on the successes already achieved.

Students in Groups
Groups will comprise one-year interprofessional cohorts set by schools based on the first year students are seriously engaged in practitioner learning (laboratory rotations, clinical rotations). This will vary by program.

One group will be a control group. To avoid a large imbalance in the amount of work groups will have to do (and to avoid creating sham work for the control group), the baseline/control group will be the first year of the four-year plan. The first year of the plan, we will assess students using our complete battery of evaluations, but they will only receive the existing DID intervention.

Groups 1-4 will be the four interprofessional intervention groups. Beginning in year two, we will run these groups concurrently. Students will be randomly assigned to intervention groups and their participation will last for one academic year based on a statistical power analysis and the recognition that evaluation is labor-intensive, only 200 students will be assigned to the groups that experience the WREF intervention and 100 students to the group that experiences the GREF intervention. At the conclusion of the academic year, a new set of students will be randomly assigned to intervention groups. This process will continue for three years. At the end of each year, we will analyze the data from the intervention...
groups to compare to the control/baseline group (providing information for formative analysis and a user-centered design). At the end of the three years, we will perform a summary analysis comparing all three years of intervention group data to our control/baseline group data.

Data from each group will be assessed using a set of measures described in the section labeled Assessment Plan. Measures will include pre- and post-tests, self-assessments, and faculty-driven assessments. Outcome measures will compare groups based on final assessments. The assessment modalities are shown in the table in the Assessment section.

**QEP Goals and Desired Learning Outcomes**

Ultimately, the goal of our QEP is to benefit our students’ learning and their work by increasing and sustaining professionalism—specifically the behaviors, virtues, and identities that define professionalism. However, because we do not yet know which pedagogical methods, or combinations of pedagogical methods, work best to achieve that ultimate goal, we must proceed in stages, conducting education-to-outcome research to determine the most effective methods. At the level of the QEP, then, our goal is to determine which pedagogical methods are most effective in producing professionalism in our students as measured by performance on all our assessment tools. We will measure the effectiveness of our QEP by rating student learning outcome attainment, student participation rate, perception of professionalism in the clinical and scientific learning environment on the student satisfaction survey, and qualitative feedback from the qualitative summary reflection task.

1. Increase scores on student learning outcomes related to professionalism in the clinical and scientific learning environments.
2. Identify which combination of instructional strategies yields the best return on increasing students’ level of professionalism.
3. Deliver a quality program as perceived by student feedback.

At the level of our students, our goals and concomitant desired student learning outcomes are as follows; however, we anticipate that different student groups will perform differently.

1. Students will behave in a consistently acceptable professional manner during clinical and scientific learning rotations.
2. Students will express virtues associated with professionalism during clinical and scientific learning rotations.
3. Students will internalize a professional identity during clinical and scientific learning rotations.

**RESOURCES TO INITIATE, IMPLEMENT, AND COMPLETE THE QEP**

The institution is committed to initiating, implementing, and analyzing the impact of the QEP to determine if the plan will be permanently integrated into our curriculum across the didactic and experiential learning environments.

**Capability to Initiate the Plan**

UMMC has committed sufficient financial and capital resources to ensure the success of the QEP. Very detailed budget information, job descriptions, and organizational structure is provided.

**Personnel Resources**

Responsibility for the implementation phase of the *Professionalism In Practice* program will rest with the Office of Academic Affairs and UMMC’s Center for Bioethics and Medical Humanities (CBMH). The
CBMH was established in 2008 to add value to the existing educational, research, and service missions of UMMC by placing an emphasis on health care ethics and seeking greater understanding of the social and cultural contexts of the modern biomedical enterprise. In its educational role, the center serves as a teaching and learning resource for bioethics. This educational role works in conjunction with the research mission of the center, which has three components. The first is to provide ethics and medical humanities teaching and training for medical students and eventually expanding into other schools. The second is to provide ethics support to the UMMC research community as it makes an effort to examine ethical issues such as research using human subjects, the use of laboratory animals, and scientific integrity. The third component of the center’s research mission is its own internal research programs which focus on the socio-cultural context of modern health care, including professionalism in medicine and science. The educational role and research mission of CBMH also complement the service mission of the center, which provides clinical ethics consultation for UMMC’s hospitals and clinics. These roles of the CBMH are carried out by the staff and ten core faculty members who have extensive experience and training in the center’s areas of responsibility. The CBMH initiated, implemented, and transitioned the previous QEP into ongoing expectations of programs at UMMC. CBMH, in concert with the Office of Academic Affairs, are well equipped to provide the technical expertise needed to support the Professionalism in Practice QEP.

The specific organizational structure for implementation of the QEP will consist of a unit operating out of Academic Affairs, including the Executive Director of Academic Effectiveness, the Director of Assessment, and QEP Director, and the CBMH, including a director, a research analyst, and an advisory committee.

**QEP Director**
The director of the QEP will be responsible for the oversight, implementation, and completion of the entire plan. This will include liaising with UMMC administration and all relevant committees and offices, managing the budget and authorizing expenses, liaising with each school to determine student research cohorts, assigning students to research treatment groups, managing assessment tools, assuring the automation of all QEP assessments, organizing all data collection, ensuring delivery of data to statistical analyst, ensuring delivery of ancillary data to appropriate UMMC offices, preparing all financial transactions regarding the QEP, assisting in the development of the revised PAT, assisting in the development of the MOD education module, organizing all QEP-related meetings, and producing all relevant documents concerning the QEP for both SACSCOC including the 5th year report.

The director of the QEP is expected to have a terminal degree. The desire is that this person will have shared job duties with the Office of Academic Affairs and will be hired in the spring of 2022. Though the QEP Director portion of this position will be half the job, we are certain this is sufficient time and resource allocation.

**QEP Research Analyst**
The Research Analyst for the QEP will be responsible for assisting with the development of the revised PAT assessment tools, assisting with the development of the MOD professionalism education module, interpreting the data collected by QEP assessments, writing academic papers on research findings for publication, writing internal reports about the QEP data, incorporating QEP data into the didactic curriculum, assisting in data analysis, assisting in WREF assessments, and running all the GREF group reflections/focus groups and writing up results (20 group reflections/focus groups per year).

**QEP Advisory Committee**
The QEP Advisory Committee will be responsible for assisting in the implementation of the QEP, assisting in developing the revised PAT, assisting in developing the MOD education module, providing
readers for the qualitative summary reflections, interpreting data, providing feedback on research publication drafts, and shaping recommendations for curriculum changes. The QEP Advisory Committee will include members of the CBMH including clinicians, psychiatrists, humanities scholars, the Director of the CBMH, UMMC’s Director of Assessment, the dedicated statistical data analyst for the QEP, students from each school, and faculty representatives from the schools. All other functions (educational technology design, financial transactions, and printing materials) will be provided by in-house UMMC offices and managed by the QEP Director.

**QEP Statistician**
A faculty member from the School of Population Health in the Data Science program will contribute 10% of his/her time to the work on the QEP. The statistician for the project will conduct the required data analysis for the project.

**Office of Academic Affairs Support**
The Executive Director of Academic Affairs (UMMC’s SACSCOC liaison) and the Director of Assessment will also provide support for the QEP as SACSCOC subject matter experts to make sure the QEP project progresses successfully.

**Educational Technology Resources**
UMMC maintains student and faculty access to numerous e-learning and data analysis platforms which will be used to manage and administer QEP assessments, including Canvas, Microsoft Teams, Qualtrics, REDCap, and SPSS.

**Physical Resources**
The CBMH currently shares administrative space with the Office of Academic Affairs. UMMC has made an additional 750 sq. ft. of office space available in the Verner Holmes Learning Resources Center to accommodate the QEP functions of the CBMH. This new space will be sufficient to support all CBMH personnel and activities. The CBMH will continue to share common infrastructure resources (networked computer systems, photocopiers, conference room, etc) with the Office of Academic Affairs.

**Financial Resources**
UMMC has committed sufficient financial and capital resources to ensure the success of the QEP. An allocation of $483,700 has been made to support QEP implementation. The itemized budget is provided in Figure 5.
Figure 5. Detailed QEP Budget Allocation for 5 Years

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<td>30,000</td>
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<td>8,400</td>
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<td>Prof Dev and Travel</td>
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</tr>
<tr>
<td>Totals</td>
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<td>7,500</td>
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**Grand Totals**

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<tr>
<td></td>
<td>97,540</td>
<td>99,540</td>
<td>95,540</td>
<td>95,540</td>
<td>95,540</td>
<td>483,700</td>
</tr>
</tbody>
</table>

* $15/assessment @ ~ 250 assessments
** $100/session @ 20 sessions (10 students per session)

Capability to Implement and Complete the Plan
With the staff assignments and committees supporting the QEP, the institution will be able to implement and complete the plan. The delivery of the instructional methods and assessments will be distributed to students via an instructional technology platform. A brief overview of the timeline for the QEP is included in Figure 6.
Figure 6. Timeline Overview

2019
YEAR -2
QEP coordinator hired, attends SACSCOC conferences

2020
YEAR -1
QEP steering committee formed
Institutional data collection began

2021
YEAR 0
Meetings of QEP steering committee
Literature review
Student focus groups
QEP Design committee formed
Assessments chosen
Instructional design strategy developed
Produced QEP Proposal
Budget approved

2022
YEAR 1
SACSCOC On-site Review
Refine strategies and assessments
Run Program Year 1

2023
YEAR 2
Run Program Year 2

2024
YEAR 3
Run Program Year 3

2025
YEAR 4
Run Program Year 4

2026
YEAR 5
Run Program Year 5
Complete program analysis
Prepare 5th year report
Develop ongoing action plan
In program year 1, all students in their first year of experiential learning in clinical or scientific learning environments will receive the behavior, virtue, and identity assessment panel at the beginning and end of the year to set the baseline data for the study. At the end of each year, students will complete a qualitative written reflection based on focused prompts. No additional instructional methods will be delivered for group 1. In program years 2-5, instructional methods will be assigned to students in their first year of experiential training in the clinical or scientific learning environment (approximately 1100 students from all schools) as part of the “Build On” Model. The assessments required of all students are outlined in Figure 7.

Figure 7. Detailed Timetable of Assessments and Instructional Methods

<table>
<thead>
<tr>
<th>YEAR</th>
<th>INSTRUCTIONAL METHODS</th>
<th>SLO: Behavior Panel</th>
<th>SLO: Virtues Panel</th>
<th>SLO: Identity Panel</th>
<th>QEP: Quality</th>
</tr>
</thead>
</table>
| Year 1 | Didactic              | -Beginning and end of year  
-Faculty will complete PAT evaluating student behavior at the end of each rotation  
-Student will complete self-evaluation on PAT at end of year | Beginning and end of year (pre- and post-test) | Beginning and end of year [pre- and post-test] | Students will complete qualitative summary written reflection at the end of the year |
| Group 1: Didactic + Module | -Beginning and end of year  
-Faculty will complete PAT evaluating student behavior at the end of each rotation  
-Student will complete self-evaluation on PAT at end of year | Beginning and end of year (pre- and post-test) | Beginning and end of year (pre- and post-test) | Students will complete qualitative summary written reflection at the end of the year |
| Group 2: Didactic + Module + Evaluation | -Beginning and end of year  
-Faculty will complete PAT evaluating student behavior at the end of each rotation  
-Student will complete self-evaluation on PAT at end of year  
-Students will appraise faculty at the end of each rotation | Beginning and end of year (pre- and post-test) | Beginning and end of year (pre- and post-test) | Students will complete qualitative summary written reflection at the end of the year |
| Years 2-5 | | | | | |
| Group 3: Didactic + Module + Evaluation + Written Reflections (two times a year) | -Beginning and end of year  
-Faculty will complete PAT evaluating student behavior at the end of each rotation  
-Student will complete self-evaluation on PAT at end of year  
-Students will appraise faculty at the end of each rotation | Beginning and end of year (pre- and post-test) | Beginning and end of year (pre- and post-test) | Students will complete qualitative summary written reflection at the end of the year |
| Group 4: Didactic + Module + Evaluation + Written Reflections + Group Reflections (two times a year) | -Beginning and end of year  
-Faculty will complete PAT evaluating student behavior at the end of each rotation  
-Student will complete self-evaluation on PAT at end of year  
-Students will appraise faculty at the end of each rotation | Beginning and end of year (pre- and post-test) | Beginning and end of year (pre- and post-test) | Students will complete qualitative summary written reflection at the end of the year |
ASSESSMENT PLAN

The assessment plan of the QEP includes measuring the QEP goals and Student Learning Outcomes identified in the proposal.

QEP Assessment Strategy
As described in literature review in Appendix 2, assessment of professionalism is complicated and needs to be multimodal. There is no straightforward “professionalism detector.” Our own way of looking at the assessment of professionalism relies on the notion of convergence. Because professionalism is affected by knowledge, behavioral habits, virtues and character traits, and a sense of identity, all of these are worth measuring. While, ultimately, professional behavior is the goal, behavior can be highly affected by context. Behavioral habits, virtues/character, and identity can be more internalized and carried with the agent into many different contexts. While it is technically possible, as a matter of logic, that a person with unprofessional habits, unprofessional character traits, and lacking a professional identity always behaves professionally, it is highly unlikely. What is more likely is that a person who developed professional behavioral habits, professional virtues and character strengths, and a professional identity will behave professionally in a wide variety of situations. Thus, while professional habits, virtues, and identity do not ensure professional behavior, they make it much more likely. All of these converge on professional behavior and promoting them and assessing them converges on achieving our goal of increasing the likelihood of professional behavior.

Figure 8 details the assessment strategies, target, and timeline for the QEP goals.

<table>
<thead>
<tr>
<th>QEP Goals</th>
<th>Assessment Method</th>
<th>Target Outcomes</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase scores on student learning outcomes related to professionalism in the clinical and scientific learning environments.</td>
<td>Behavior Assessment Panel</td>
<td>*See student learning outcome assessment strategy.</td>
<td>*See student learning outcome timelines</td>
</tr>
<tr>
<td></td>
<td>Virtue Assessment Panel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identity Assessment Panel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify which combination of instructional strategies yields the best return on increasing students’ level of professionalism.</td>
<td>Pre- and post-test scores for each student learning outcome assessment panel disaggregated by Instructional strategy</td>
<td>Students will perform stronger on assessments after varied combinations of Instructional strategies. Identify which Instructional strategy combination is most effective.</td>
<td>Year 1: Baseline capture of year start and end assessments. Years 2-5: Start instructional methods. Capture year start and end assessments.</td>
</tr>
<tr>
<td></td>
<td>Student participation rate</td>
<td>Students will have a higher participation rate in every Instructional method group each year of the QEP.</td>
<td></td>
</tr>
<tr>
<td>Deliver a quality program as perceived by student feedback.</td>
<td>Qualitative summary reflection task</td>
<td>Students will submit statements reflecting a positive experience with the QEP’s instructional methods and assessments.</td>
<td>End of each experiential year in program.</td>
</tr>
</tbody>
</table>
The assessment strategies measuring student learning outcomes associated with the QEP are included in Figure 9.

**Figure 9. Assessment of Student Learning Outcomes**

<table>
<thead>
<tr>
<th>SLO Goals</th>
<th>Assessment Method</th>
<th>Target Outcomes</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEHAVIOR:</strong> Students will behave in a consistently acceptable professional manner during clinical and scientific learning rotations.</td>
<td>Masiach Burnout Inventory <em>indirect assessment</em></td>
<td>Stabilized or reduced scores in exhaustion, cynicism, or professional efficacy compared to control group</td>
<td>The Behavioral Assessment Panel should take students approximately 20 minutes to complete. This panel will be conducted at the beginning and end of the experiential learning year.</td>
</tr>
<tr>
<td></td>
<td>Professionalism Assessment Tool (PAT-S) <em>direct assessment</em></td>
<td>Increased mean summative score of all students as compared to control group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professionalism Assessment Tool (PAT-F) <em>direct assessment</em></td>
<td>Increased mean summative score of all students as compared to control group</td>
<td>Faculty will complete this evaluation for every rotation.</td>
</tr>
<tr>
<td><strong>VIRTUES:</strong> Students will express virtues associated with professionalism during clinical and scientific learning rotations.</td>
<td>Jefferson Scale of Empathy <em>direct assessment</em></td>
<td>Stabilize or increase empathy rating from pre- to post-test as compared to control group</td>
<td>The Virtues Assessment Panel should take students approximately an hour to complete. This panel will be conducted at the beginning and end of the experiential learning year.</td>
</tr>
<tr>
<td></td>
<td>Moral Competence Test <em>direct assessment</em></td>
<td>Increased C-score, moral competence, and moral orientation scores compared to control group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Values in Action Character Strengths Survey <em>direct assessment</em></td>
<td>Increased percentage of signature strength scores in the areas attributed as strengths of health care workers and scientists (Huber 2020)</td>
<td></td>
</tr>
<tr>
<td><strong>IDENTITY:</strong> Students will internalize a professional identity during clinical and scientific learning rotations.</td>
<td>MacLeod Clark Professionalism Identity Scale (MCPIS) <em>direct assessment</em></td>
<td>Stabilize or increase ratings on the identity scale compared to control group</td>
<td>The Identity Assessment test should take approximately 30 minutes to complete. This test will be conducted at the beginning and end of the experiential learning year.</td>
</tr>
</tbody>
</table>
Details within Assessment Strategy
Student Workload: As noted in Figure 9, the entire battery of assessments takes less than an hour and a half hour and will be performed at most only twice in one year’s time (the length of time a student will be in the QEP study). With both the pre-test and post-test phases, students will spend less than 4 hours being assessed over an entire year.

Assessment Delivery: All the assessments we are using will be online. In most cases they will be delivered using our online education platform, Canvas, though in some cases they will be delivered using the proprietary online survey system of the assessment in question which also allows for off-site analysis.

Assessment Timing: There is no requirement that all assessments be performed in the same sitting. While this may be the most efficient method, the QEP Director may also see fit to separate the assessments.

Assessment Fatigue and Randomization: To reduce the chances of fatigue effects if assessments are performed in one sitting, we will randomize the order of assessments for each student.

Anonymity: It is important for certain assessment measures, such as the self-assessment and the written reflection, that students be assured that their responses are anonymous. We will make it clear that any information provided through the assessments will not be linked to students, will not be “graded,” and cannot adversely affect them. This will be accomplished through having no identifying digital links to student statements, by informing students to provide no socially identifying information in the written reflections, and by keeping all data electronically secured with access limited only to the QEP Director, the research analyst, the statistical analyst, and specific QEP Advisory Committee readers.

QEP Assessment Measures
As described in the QEP proposal literature review, professionalism is expressed in four domains – knowledge, behavior, virtue, and identity. Knowledge is already taught and tested at UMMC through the existing didactic curriculum which was the major focus of the previous QEP. For this QEP, we will instead focus on determining which pedagogical practices best promote professional behavior, virtue, and identity in experiential/practitioner settings. These domains will be assessed using the evaluation tools described below. All these evaluation tools are validated and most are widely used measures, providing quantitative information, especially about the effects of educational interventions. The measures include direct, indirect, quantitative, qualitative, self-reported, and other-reported approaches.

Behavior Panel
The panel of assessments related to behavior include the Maslach Burnout Inventory and the Professionalism Assessment Tool. Figures 10 and 11 contain screenshots of portions of the related assessment.

*Maslach Burnout Inventory (General Student Scale) (MBI) – Figure 10*
Assessment Target: Behavior (professional efficacy)

The phenomenon of burnout is recognized in the International Classification of Disease-11 as a stress-related occupational phenomenon characterized by exhaustion, mental distance from one’s job, negativity and cynicism toward one’s job, and reduced professional efficacy. Though not directly a measure of
professionalism, burnout is a serious condition strongly related to a person’s capacity and motivation to maintain adequate levels of professionalism (World Health Organization, 2019). Since burnout is a phenomenon that affects healthcare and graduate students, we deemed it very useful to measure. The MBI is recognized as the leading measure of burnout and has been validated by extensive research conducted in the more than 35 years since its initial publication. The MBI-General Survey for Students MBI-GS (S) was specifically designed for use with adult students in college and university and covers three scales: Exhaustion measures feelings of being overextended and exhausted by one’s studies; Cynicism measures an indifference or a distant attitude towards studies; Professional Efficacy measures satisfaction with past and present accomplishments and explicitly assesses an individual's expectations of continued effectiveness at school.

**Professionalism Assessment Tool (PAT) – Figure 11**

Assessment Target: Behavior

The PAT is an assessment instrument designed and validated by the developers of the previous UMMC QEP. This tool is fashioned after the Professionalism Assessment Form described by Blesofsky (2008) and is based on the six elements of professionalism identified by the American Board of Internal Medicine including altruism, accountability, excellence, duty, honor, and integrity.

The format of the PAT is unique compared to common Likert-type scale scoring instruments in two ways. First, it provides the evaluator with prompts that describe specific behavioral examples of each professionalism element. These prompts assist the evaluator in accurately scoring the student and limit misinterpretation regarding the specific student behaviors that fall within each category. Second, the PAT is constructed on a quasi-Gaussian scale rather than on a traditional Likert-type scale. This 0 to 100 to 0 format allows the evaluator to more precisely score a student who, for example, may be “too empathetic” or “too blunt” as compared to a student who is empathetic or communicates...
honestly in a more balanced way. This is consistent with the classical Aristotelian description of virtuous behavior as an optimum degree of a trait with vices of deficiency and vices of excess rather than as a linear amount of a trait with a minimum and maximum.

A professionalism sub-committee of the School of Medicine Curriculum Committee worked to expand the original Blasofsky form to include written and verbal communication skills. They also conducted a pilot project to apply the PAT to the evaluation of third-year medical students. The success of this project led to the inclusion of the PAT in the QEP metrics battery and the adoption of this instrument for student grading.

Since the initial development of the PAT, other committees that have looked at professionalism (of which the Chair of the QEP Steering Committee is also a member) have expressed a desire to expand the areas of professionalism. UMMC currently conducts a survey of clinical supervisors to inform the potential expansion of the PAT to accommodate up to 12 areas of professionalism. We are also looking into ways to reword or add to the PAT to more clearly include non-clinical professionalism. The potential revision and expansion of the PAT will take place February–May of 2022 in order to have the tool ready for use in Year 1 (August) of the QEP. To be clear however, the PAT is already in use and has been tested. Any potential revision is not a wholesale change but only an expansion.

The PAT summative score will be the average of all PAT evaluations for a given student. The number will differ depending on how number of practitioner rotations for each student. We will use the average of the PAT scores because we are not interested in comparing change over time within groups but only the overall level of professionalism between groups.

Virtue Panel
The panel of assessments related to virtue include the Jefferson Scales of Empathy, the Moral Competence Test, and the Values in Action Character Strengths Survey. Figures 12, 13, and 14 contain screenshots of portions of the related assessment.

Jefferson Scales of Empathy (JSE) – Figure 12
Assessment Target: Virtue (application of empathy)
Direct Measure

Empathy is a fundamental component of health care professionalism and in this context may be described as the capacity to appreciate another’s feelings without “joining” or experiencing them. When exercised as a cognitive activity, empathy allows a health care provider to understanding a patient’s emotions, sensibilities, and experiences while also maintaining a level of emotional separation that is sufficient to prevent interference with clinical judgment or action. The centrality of empathy to effective provider-patient relationships has been well documented. Some of the most commonly-used measures of empathy in the healthcare environment are the JSE. These instruments are self-administered, 20-item, seven-point Likert-type scale tests that derive an empathy score for each respondent. Construct validity of the scale scores has been documented to be convergent with components of empathy described in the literature and to correlate with numerous metrics that are conceptually relevant to empathy. The JSE have been used...
effectively to document the decline in empathy observed in medical students over the course of their education.

**Moral Competence Test (MCT) – Figure 13**  
Assessment Target: Virtue (quality of moral reasoning, stage of moral reasoning development)

The MCT measures a participant's moral-democratic competence (defined as the ability to resolve problems and conflicts on the basis of moral principles through deliberation and discussion, instead of through violence, deceit, or submission) and a participant’s moral orientation (in terms of Kohlbergian stage of cognitive development). The test measures the ability to judge arguments by their moral quality rather than by opinion-agreement or other nonmoral criteria. The MCT consists of pro and contra arguments, two dilemma stories (workers, doctor), representing six moral orientations, forming a 2 x 2 x 6 orthogonal design. Participants are confronted with a difficult moral task and asked to judge agreeing and opposing arguments by their moral quality rather than their level of opinion-agreement. Participants rate arguments for and against a given decision on a 9-point scale (reject – accept). Results are presented in a C-score, from 0-100, and scores two aspects of moral reasoning–moral competence and moral orientation.

**Values in Action Character Strengths Survey (VIA) – Figure 14**  
Assessment Target: Virtue (character strengths, attitudes)

The VIA comprises an online 240-item measure of 24 character strengths (10 items per strength). Participants are instructed to answer each item on the VIA in terms of “whether the statement describes what you are like.” Participants respond according to a 5-point Likert scale ranging from (1= very much unlike me, 5= very much like me). Sample items include “I find the world a very interesting place,” which gauges curiosity, and “I always let bygone be bygones,” which gauges forgiveness. People can score anywhere from 10 to 50 points for each of the 24 strengths. A higher score on a scale indicates that the participant more strongly identifies with that scale's associated strength. The results rank order the participant's strengths from 1-24, with the top 4-7 strengths considered “signature strengths.” An added testing module also tests participants for virtues – the six conceptually derived virtues described by Peterson and Seligman (2004) (Wisdom, Courage,
Humanity, Justice, Temperance, Transcendence) and the three empirically derived virtues described by McGrath (2014) (caring, inquisitiveness, and self-control). While all character strengths and virtues are important, research specifically in the medical field has shown that the commonly described virtues important to healthcare are compassion, courage, altruism, and benevolence, while the most commonly described character strengths were fairness, honesty, kindness, and teamwork (Huber et al., 2020).

Identity Panel
The assessment related to identity includes the MacLeod Clark Professional Identity Scale. Figure 15 contains a screenshot of a portion of the assessment.

*MacLeod Clark Professional Identity Scale (MCPIS-9) – Figure 15*
Assessment Target: Identity

The MCPIS-9 is a quantitative tool developed by MacLeod Clark et al. (2006) to measure professional identity in healthcare students. It has also since been validated for use with undergraduate nursing students. The evaluation consists of eight items that are ranked using a 5-point Likert response scale ranging from strongly disagree to strongly agree.

Overall QEP Assessment on Quality
A guided reflection summary will prompt students to capture their experiences with professionalism and the QEP program.

Qualitative Summary Reflection
Assessment Target: Overall QEP

The summary reflection will be measured by a rubric used to qualitatively assess the degree, depth, and level of critical analysis a student demonstrates on a written reflection of professionalism challenges in their experiential training though the assessment will have a set of associated quantitative scores. The rubric will be based on an existing rubric used for assessing medical student reflection exercises (Wald et al., 2019) but will be adapted for use for this plan specifically. These adaptations will allow us to expand the scope of the rubric to clearly include laboratory students as well as clinical students and will emphasize reflecting and analyzing specifically on bedside or bench side events that the student has faced. This will allow us to tailor the assignment of and assessment of reflection to the needs of our students and the QEP.

It is possible that students may want to write a reflection on some event that would merit a formal report of misconduct. Although for purposes of the QEP, these written reflections are anonymous, we will take this eventuality into consideration by including in the prompt a message about how to anonymously report misconduct using our UMMC internal processes about which students report they are well-informed.

QEP Assessment Results
The QEP will last for five years with a 5th-year report due to SACSCOC. The individual and cumulative data results of years 2-5 for groups 1-4 will be compared to the year 1 control group. All assessments will be implemented using one of UMMC’s existing educational technology delivery platforms or will be handled through a data collection research account for the proprietary measure involved.
**QEP Secondary Data Benefits**

It is useful to note that the data collection and assessment information for the QEP will also provide a secondary benefit to UMMC’s planning and evaluation processes. As described in the note on pedagogy and assessment, some of the activities we are using for assessment measures are also pedagogical interventions being studied for their efficacy in promoting professionalism. The most prominent of these are the PAT evaluations. For purposes of QEP assessment, clinical training and laboratory supervisors will evaluate students on their professional behavior using the PAT after every experiential learning rotation. Students will also provide a one-time, end-of-year evaluation of themselves using the PAT. However, for purposes of QEP pedagogical intervention research, students will evaluate their clinical training and laboratory supervisors using the PAT after every clinical or laboratory rotation. This is intended to promote students’ attention to professional behavior issues and internalization of standards.

This means that there will be a great deal of information produced by students as they use the PAT to evaluate their experiential learning supervisors. That data is **not** the goal of the QEP. The goal of the QEP is to use the act of evaluating others as a pedagogical device. Nonetheless, the data being produced by this pedagogical activity is very useful information and could be used by UMMC in its ongoing institutional planning and evaluation. Therefore, all the data produced by students’ evaluations of their experiential learning supervisors will be provided to the Office of Academic Effectiveness to analyze and distribute to relevant UMMC offices or committees as they deem appropriate. Though not a goal of the QEP, this is a valuable “side-effect” of the QEP that may be used to further UMMC’s educational and healthcare delivery mission.

**SUMMARY**

Attending to Standard 7.2, UMMC has developed a QEP that directly addresses the following requirements:

**Topic**

UMMC has identified a QEP through our ongoing, comprehensive, planning and evaluation processes.

This is demonstrated by our reliance on UMMC Institutional Planning Data, the UMMC previous QEP, information from the Clinical Learning Environment Committee, information from other committees on professionalism, a comprehensive literature review, student focus groups conducted for the purpose of QEP identification, and direct relatedness to the new UMMC Strategic Plan. UMMC has endeavored to produce a clear and well-defined topic directly related to and arising from our institutional planning processes, involving a wide range of constituents, and determined by a representative process that considered institutional needs and the plan’s viability.

**Broad-based Support**

UMMC has broad-based support of institutional constituencies.

This is demonstrated by the creation of a steering committee of 52 people from every school at UMMC, from clinical training programs, and from multiple laboratory training programs, including students, faculty, staff, administrators, clinicians, researchers, parents of students, and alumni. Throughout the QEP process, UMMC has identified important constituent groups to be engaged in developing and initiating the plan, keeping stakeholders well-informed and engaged in the plan’s implementation and assessment.

**Focus**

UMMC has a QEP that focuses on improving specific student learning outcomes.
This is demonstrated by the topic identification of Professionalism in Practice and the goal of testing different combinations of pedagogical methods for promoting, improving, and solidifying practitioner professionalism in the areas of behavior, virtues, and identity. UMMC has focused our QEP on important outcomes related to student learning – outcomes that are specific and measurable. Some baseline data has already been analyzed from the previous QEP, though the plan will collect one full year of new baseline data using our new QEP battery of assessment tools and with a wider array of students. UMMC’s goals for improvement are specifically appropriate for our institution and our students and we intend to use the QEP data to improve our curriculum.

Commits Resources
UMMC has committed resources to initiate, implement, and complete the QEP.

This is demonstrated by the itemization of all QEP-related needs, the commitment of $483,700 in new allocations dedicated specifically for the QEP, the commitment of human resources in the form of a QEP Director, a QEP Research Analyst, a QEP Statistical Analyst, a QEP Advisory Committee, and by housing the QEP in the existing Center for Bioethics and Medical Humanities. UMMC has endeavored to clearly identify human and financial resources for all stages of the plan, to involve stakeholders in ongoing planning and evaluation, and to maintain the flexibility to adjust resources if necessary.

Assessment
UMMC includes a plan to assess achievement in the QEP.

This is demonstrated by the identification of seven literature-supported, evidence-based, assessment instruments and methods including direct, indirect, quantitative, qualitative, self-reported, and other-reported measures. Our outcomes are specific, measurable, clearly related to our student learning goals, includes formative and summative data collection and analysis, and the process for data collection has been assigned to appropriately skilled and supported institutional personnel with a timeline for data tasks clearly established.
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APPENDICES
APPENDIX 1: ACTIONS OF THE QEP STEERING COMMITTEE

VI. First Stage

i. Once created, the QEP-SC was presented with a formal summary of information about the nature of the QEP drawn from SACSCOC documents and the prior UMMC QEP. The QEP-SC had its first meeting on July 14, 2020, to discuss QEP requirements, the SACSCOC reaffirmation process, and possible QEP topics. The topic of professionalism (defined as active adherence to the norms, values, and ethical standards of one’s professional community—though see the literature review for greater detail on the complications of the definition) in clinical/practitioner settings was introduced and discussed for four reasons: 1) the topic had become strongly emphasized by numerous healthcare education and professional organizations, including the Liaison Committee on Medical Education (LCME), 2) it was a natural progression from the previous QEP, which focused on teaching professionalism in the didactic, but not clinical, curriculum, 3) it fit well with the specific character of an academic healthcare institution, and 4) the Clinical Learning Environment Committee had specifically recommended that the QEP topic be professionalism in the clinical context.

ii. The topic received very positive responses. A significant part of the discussion regarded the value of expanding the focus on professionalism beyond patient clinical settings to other areas of applied training. The intent was to include as many types of students and programs as reasonably possible. UMMC has a number of programs that are not directly clinical in nature, such as various graduate-level laboratory and fieldwork programs, that also emphasize experiential learning and practical “real-world” training. The Steering Committee believed expanding the focus to all “practitioner” training contexts would be useful and help promote interprofessional respect and interaction.

iii. It was decided that the Chair of the Steering Committee would produce a document outlining a rationale for choosing this topic (making it clear that any other topics were also open for discussion). The rationale would include a summary on relevant UMMC institutional planning data, a review and summary of the literature on issues in clinical and practitioner professionalism, a summary of the results of two student focus groups (conducted by the QEP-SC Chair) on their experiences in clinical training, a summary of the processes of clinical and practitioner training in each UMMC School, and a summary of the relevant institutional comprehensive planning and evaluation processes.

VII. Second Stage:

i. That document (QEP Topic Justification Document) was created over the next few months and submitted to the QEP Steering Committee on November 4, 2020. The document (32 pages) was based on an initial literature review of over 50 published papers, a review of UMMC institutional planning, and two student focus groups. The Steering Committee met on November 11 (virtually) to discuss the document. The response was entirely positive, and the committee voted unanimously to recommend to the UMMC SACSCOC Leadership Committee that the QEP topic be “improving professionalism training in clinical and other practitioner training contexts”. The Chair of the Steering Committee developed a recommendation document including a “next steps” plan and submitted the document to the Leadership Committee on December 26, 2020. The Leadership Committee unanimously voted to approve the topic February 11, 2021. The title of the QEP emerged over time as “Professionalism in Practice.”
VIII. Third Stage:

i. Following approval by the SACSCOC Leadership Committee, the next step for the QEP-SC was for the Chair and the Library representative steering committee member to conduct a second, wider literature review on issues and best practices in professionalism in order to inform the specific design of the QEP. That search was conducted and resulted in over 500 relevant published articles, books, chapters, statements, and guides, of which 250 were included in the final literature review.

ii. The QEP-SC Chair then took all this material and created another document (QEP Design Literature Review and Notes Document, 62 pages) that included a summary of the topic selection process, the literature review for the QEP design, initial notes on the QEP design, initial notes on assessment strategies and measures, initial notes on Lead Evaluator possibilities, and a next steps summary. That document was submitted to the QEP-SC April 20, 2021, and the committee met on April 26, 2021 to discuss the findings and options. The document was very positively received. Discussion centered around making it clear that laboratory students (and not just patient clinical students) would be included in the QEP. There were also suggestions to make the design of the QEP more of an educational research/scientific study in order to gain as much objective data as reasonable. The committee recommended that the Chair create a small Design Subcommittee to develop the specific design and methodology for the QEP and choose potential assessment tools.

IX. Fourth Stage:

i. UMMC sought to make use of the SACSCOC option of an advisory visit by our SACSCOC liaison. As part of that advisory visit, the Chair of the QEP-SC created a document explaining all the work that had been done on the QEP so far (“Professionalism in Practice: Outline of the UMMC QEP for the Initial Advisory Visit”, 51 pages). The Advisory visit occurred May 5, 2021, and the informal review of the QEP as it stood was very positive. Suggestions were made for clarifying a few points, such as clearly distinguishing the clinical/practitioner training environment from the typical didactic environment and tailoring assessment to student learning. All advice was incorporated into the next iteration of the proposal.

ii. UMMC also sought to make use of the new SACSCOC option of a non-binding Off-Site Advisory Review of a brief summary of the QEP proposal. The Chair of the Steering Committee created a short document that included new material from the Advisory Visit, new material from the Design Subcommittee (which began its work June 1), and further information from other UMMC committees (Off-Site Reaffirmation Committee Review Document, 3 pages). That document was included in UMMC’s compliance materials sent to SACSCOC in late July 2021. The results of the off-site review of the QEP summary were received November 9. The short review was one-hundred percent positive, identifying no problems, indicating all requirements were met, and giving no advice for changes.

X. Fifth Stage:

i. The Chair of the QEP-SC followed through on the committee’s recommendation to create a small QEP Design Subcommittee. In late May, the Chair contacted three other members of the QEP-SC to invite them to be members of the subcommittee. All enthusiastically agreed. Members were chosen for the expertise in professionalism, healthcare ethics, experience with professionalism training, and enthusiasm for the plan. Including the Chair, the Design Subcommittee had four members.

ii. The Design Subcommittee first met on June 6, 2021. The subcommittee reviewed the materials produced to that point, discussed goals and processes, and discussed experiences in professionalism training from other medical centers. From early June
of 2021 to late July of 2021, the Design Subcommittee met formally five times. After each meeting, the Chair would create a document outlining the design of the QEP that was shoring up so far, then distribute that document to subcommittee members for further consideration. Discussions often included a need to gather more information, to collect examples of assessment tools, and to confer with other UMMC committees that were also engaging issues of professionalism. The Chair also met with a campus statistics expert, both to secure her support for the entirety of the QEP data analysis and to get advice on the QEP design. During this time, the Lead Evaluator was also selected and invited.

iii. As a result of this continuous and productive exchange, the subcommittee produced 3 drafts of a design information document and 2 drafts of a formal design description, each one reflecting changes and refinements suited to making the QEP a success. The fifth document version (QEP Design Proposal 2.0, 23 pages) was sent to the entire QEP-SC for review at the end of July.

iv. The QEP-SC met on August 3 and 5, 2021 (multiple meetings to accommodate member’s schedules) to discuss the design proposal document. The discussion was very positive and productive and included recommendations to further refine the design and to adjust some assessment measures. All the recommendations were taken into account and included in the final version of the QEP Design Proposal (3.0), which was developed by the Design Subcommittee over the period from Early August to mid-October. This final version was submitted to the QEP-SC for review on October 21, 2021. The QEP-SC met to discuss the design proposal again on October 26 and 27. Discussion was very positive. There were no negative comments, and the proposal design was unanimously approved. To be clear, this QEP is very different from UMMC’s previous QEP. Though both focus on professionalism, the previous QEP focused entirely on the didactic curriculum (the knowledge domain). This QEP focuses entirely on the experiential curriculum (the behavioral, virtue, and identity domains), which is a very different environment, requiring very different training methods and assessment methods.

XI. Sixth Stage:

i. The Chair followed up with several members of the Steering Committee to gather information on their existing didactic programs and to determine how many students from each program would be participating in each year of the QEP. Using this information, and in consultation with Academic Affairs, the Office of Finance, and the Center for Bioethics and Medical Humanities (which would serve as the administrative home for the QEP), the QEP-SC Chair constructed a budget including costs for staffing, assessment measures, data analysis, and supplies, which was approved by UMMC leadership.

ii. The Chair then created the final, official QEP proposal, which was sent to the QEP-SC (and other leadership offices).

iii. These six stages constituted the process by which the UMMC QEP was developed

XII. Seventh Stage

i. Having completed the development of the QEP, the next step will be preparing for the implementation of the plan. That will occur beginning in January 2022 and will continue until July 2022. That process will include campus education about the QEP, publicity for the QEP, hiring a QEP coordinator, forming a QEP Advisory Committee, establishing protocols for assigning students to QEP research groups, and refining and automating assessments.

XIII. Eighth Stage

i. Beginning in August of 2022, the QEP will be implemented and will run for five years.
XIV. Ninth Stage

i. Following five years of QEP implementation, the final stage of the QEP will be to analyze all the data (though formative assessment analysis will be occurring throughout), prepare the SACSCOC 5th Year Report, and for the QEP Advisory Committee to recommend changes to the curriculum (if any) based on the findings of the QEP research.
Literature Review

The first literature review was related to the identification of the QEP topic (as described in section III) and included a search for publications concerned with the issue of the role of experiential training on the development and retention of professionalism in healthcare science and practice.

That review revealed that while many students in universities may periodically engage in some form of experiential learning, study abroad, or take on an internship, for the most part, learning occurs in a didactic framework, whereas in academic healthcare centers there is a very heavy emphasis on experiential training, particularly in clinical and laboratory settings. While healthcare and science students typically begin with didactic coursework—including information on professionalism and ethical reasoning—at some point they will move into clinical (or other discipline-specific practitioner) rotations where the environment is very different from the classroom. At that point, learning shifts from the formal, easily-outlined, and summarized curriculum, to an experiential curriculum shaped far more strongly by the goals, expectations, habits, and values of the supervising staff—most of whom are not primarily educators and who have widely varying skills as teachers and widely varying interests and commitments to training. As a result, the education of the healthcare student at this point becomes guided by what has been termed the “hidden curriculum” (Hafferty & Franks 1994, D’eon et al. 2007, Chuang et al. 2010, Karnielli-Miller et al. 2011, Mahood 2011, Hopkins et al. 2016, Mossop et al. 2013, Lawrence et al. 2018, Lehman et al. 2018).

The hidden curriculum is the set of informal, un-syllabized, often unarticulated, and even unintentional ways in which not only skills and information are taught, but ways in which professional behaviors, expectations, attitudes, values, and ethics are taught. By explicit statements, by implicit judgments, by facial expression, by modeled behavior, by evaluation comments, the hidden curriculum either adds to, reinforces, or conflicts with what students learn in their didactic and even pre-experiential coursework.

Recognizing the importance of the hidden curriculum—and especially recognizing the fact that it is hidden and thus not easily amenable to top-down regulation or conventional curriculum management—means that for any institution relying on experiential and clinical training for the mainstay of its pedagogy, a complete educational program must take it into account. While the formal, didactic, curriculum is central early in a healthcare student’s career, the hidden clinical curriculum is what forms the actual professional and moral worldview of the budding healthcare practitioner. From early on in the call for medical schools and healthcare training institutions to teach ethics and professionalism, it has been recognized that the easier part of such a task is incorporating professional and ethical knowledge, skills, terminology, in the formal curriculum. In an influential article, Hafferty and Franks “challenge a prevailing belief within the culture of medicine that while it may be possible to teach information about ethics (e.g., skills in recognizing the presence of common ethical problems, skills in ethical reasoning, or improved understanding of the language and concepts of ethics), course material or even an entire curriculum can in no way decisively influence a student's personality or ensure ethical conduct…most of the critical determinants of physician identity operate not within the formal curriculum but in a more subtle, less officially recognized ‘hidden curriculum.’ The overall process of medical education is…a form of moral training of which formal instruction in ethics constitutes only one small piece…any attempt to develop a comprehensive ethics curriculum must acknowledge the broader cultural milieu within which that curriculum must function.” (Hafferty & Franks, 1994). This broader milieu—especially the clinical training environment—is especially important to consider with respect to ethics and professionalism since formal ethics education occurs primarily during preclinical years and “little is known about how the
cognitive content of this education is remembered, perceived, and applied after students enter the clinical environment.” (Kaldjian et al. 2011).

This concern about the broader context in which healthcare and science students learn their profession—and even more importantly, their professional identity and moral codes—is not simply a general concern about possible areas where student learning and success may be ignored or may be at odds with what they learn elsewhere. There are numerous studies that indicate (at national and international levels) problems occur as students transition from their formal curriculum to their clinical curriculum with all its hidden components.

Decline in Empathy
Following a long history of anecdotal information that medical students become increasingly more cynical as they advance through their medical school years, empirical research has borne out the impressions, revealing that empathy measurably, significantly, declines beginning during the third year of medical school (but not in the first two years) and that decline persists through completion of medical school (Hojat et al. 2004). While this phenomenon has been detected in many studies, it has also been shown that targeted intervention can maintain empathy (Rosenthal 2011).

Moral Reasoning and Professionalism Regression
Studies have shown that, after beginning the clinical portion of their education, medical students tend to regress from a postconventional level of moral reasoning (using principles to think through moral problems to determine the proper course of action) to a maintaining-norms level of moral reasoning (simply following whatever the contextual social norms are for no other reason than that they are norms) (Hren et al. 2011). Although the majority of studies dealing with the hidden curriculum have dealt with medical education, the American Physical Therapy Association adopted a strategic explicit education program for 2006-2020 that laid out methods for teaching professionalism and changing behaviors. Results from programs that adopted those methods have been mixed, with some studies showing no change in professionalism and some studies showing declines in professionalism following clinical training experiences, with the blame being laid on the hidden curriculum (or “collateral education) (Dutton & Selheim 2014, Jette & Portnoy 2003, Hayward & Blacker, 2010).

Low Confidence in Dealing with Ethical and Professionalism Issues
Studies have shown that even at the level of medical student clinical training, students commonly face complex and challenging ethical situations, yet they do not feel that they are ready for those challenges. They look to clinical instructors for help with dealing with these challenges but often find support lacking. Interestingly, the same students that report high levels of confidence in their knowledge of ethical principles, moral reasoning skills, and professionalism information report low levels of confidence in their ability to actually address moral problems (Cordingley et al. 2007). These worries increase as students proceed through their education and begin clinical work, with, for example, in one study, 82% of third and fourth-year medical students expressing major concerns about professional responsibility and integrity, with less than 60% of second year students responding similarly (Ainsworth & Szauter 2006). While the literature on the hidden curriculum in nursing is far less developed than that related to medical students, research here shows that nursing students learn quickly that in spite of being formally taught to demonstrate critical thinking by pointing out contradictions in coursework, when dealing with clinical faculty, they risk being labeled a “troublemaker” or “manipulator” by doing the same thing (Chen 2015).

Internal Conflicts Between Idealized and Real-World Medicine
Studies have shown that following their first clinical training, medical students become strongly aware that medicine has distinct subcultures with expected rules and customs, that role-modeling is the strongest teacher, that power-hierarchy issues shade training and patient care, that patient dehumanization is
common, that their performance assessments are strongly influenced by “hidden assessments”, that normal emotional responses must be suppressed, and that personal/professional life balances are a major difficulty (Gaufberg et al. 2010). Students have also experienced frustration with the tension between studying for assessed skills and knowledge during clinical training and the perception that the most valuable things they learn are not assessed at all (Ozolins et al. 2006). The frustrations of students are mirrored in the frustration of faculty. Qualitative studies of the difficulty in teaching professionalism as seen by faculty members have indicated serious concerns about the gap between “ideal” professionalism and “real” professionalism, about unprofessionalism being a major problem, and the expectations of being a good role model actually being the greatest obstacle preventing faculty members from dealing with their own, and others’ lapses of professionalism (Bryden et al. 2010).

Medical Hierarchies and Denigrating General Practice
Studies and reports have shown that part of the culture of clinical training is to glorify specialization and to denigrate any form of general practice or family medicine. Comments such as family medicine being a “waste of intelligence” or students being told they did not need to know any answers to psychiatry questions because they were “just going to be [family doctors]” are common stories (Mahood 2011).

Predicting Professionalism Lapses in Residency and Practice
Studies have shown that students who lapse in professionalism standards while in medical school are significantly more likely to have professional lapses during their residencies and full practice (Krupat et al. 2019). Studies has also shown that medical students who demonstrated irresponsibility in medical school were nine time more likely to be disciplined by medical licensing boards (the highest predictor at 26%) (Papadakis 2015).

Burnout
Studies have indicated a strong relationship between lower student empathy scores, a lower professionalism climate, and higher medical student burnout (Brazeau et al. 2010). Burnout is now an officially recognized “occupational phenomenon” (not yet a “medical condition”) by the ICD-11, characterized by: “feelings of energy depletion or exhaustion; increased mental distance from one’s job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy” (WHO 2019).

In short, the clinical training period (and presumably the laboratory training period, though less has been studied in that context), is important, but often underappreciated. This is consistent with UMMC’s own concerns, which have shown that the clinical training is not assessed and that in our own students, empathy declines and expulsion for professionalism misconduct increases during clinical training.

However, this is not to assume beforehand that the clinical and other practitioner sides of training and their hidden curricula are entirely faulty. It may be the case that some areas of the didactic professionalism training are lacking, are genuinely idealistic instead of realistic, or too removed from the practitioner context to be meaningfully absorbed. It is also the case that the list of problems presented above do not characterize the entire population of healthcare and science students. Problems tend to stand out, however, and in areas of medical treatment and medically relevant scientific research, problems can have far-reaching negative effects even when uncommon. Finally, it must also be recognized that many aspects of the hidden curriculum can be positive (Raso et al. 2019; Holmes et al. 2014; Karnieli-Miller et al. 2011). Students who are fortunate enough to train with good role models tend to do very well and benefit greatly from mentorship and informal training. Even in these cases, though, it is very useful for students to be able to recognize and articulate what habits, attitudes, and behaviors are actually positive so that they may better emulate them in principled ways. Our QEP takes this into account and does not
assume that the hidden curriculum is entirely negative, nor does it assume that students with good role models and good experience cannot benefit from being trained to recognize and assess professionalism.

**Literature Review 2**

The first literature review was conducted as part of the QEP topic selection process and informed the choice to select “improving professionalism training in clinical and other practitioner training contexts” by the QEP Steering Committee and the SACSCOC Leadership Committee. Once that determination was made, a second literature review was conducted for the purposes of informing the specific design of the QEP.

The second literature review entailed searching for publications related to the teaching, learning, and assessment of professionalism in clinical and laboratory science contexts and resulted in over 500 relevant published articles, books, chapters, statements, and guides, of which 250 were included in the final literature review.

The second literature review revealed a considerable level of disagreement on the nature of professionalism and how best to assess it. There were, however, recurring messages, concepts, and patterns to the discussion.

The first widespread message from the large number of articles published on professionalism is how important it is (Crueess and Cruess 1997). Article after article open with statements about the central role that professionalism is playing in personal lives, the institutional settings, and the social status of healthcare. Professionalism is commonly described as “frequently discussed” (Biagioli et al. 2012), “one of the most important areas of concern that need to be addressed when planning courses” (Fard et al. 2010), [its] importance...highlighted in recent years by a series of high-profile cases (Field et al. 2009), something that “Medical educators and powerful physician organizations agree on the importance of...for the formation of good physicians” (Karches & Sulmasy 2016), “a clearly stated requirement for doctors and medical students” (Mak-van der Vossen et al. 2013), “gaining attention in medical education” (Mustika & Soemantri 2020), “an important goal in American medical education” (Shield et al. 2015), “universally embraced” (Silver 2020), having a “widespread consensus that medical students should learn” (Sturman & Saiepour 2015), including a “significant consensus that undergraduate medical education (UME) should include bioethics training” and many others. The importance of professionalism is assumed because of the emphasis of professional organizations, because of the expressed concerns of people working in healthcare fields (Fard 2010), because it is desirable as a moral and social goal, because it is beneficial to patients (AMA Principles of Ethics), and because lapses in professionalism in healthcare education years has been shown to be strongly predictive of lapses of professionalism in healthcare practice (Papadakis et al. 2005, Papadakis 2008, Papadakis 2012, Reid 2010, Crueess & Cruess 2010).

**Definitions**

The second widespread message from the professionalism literature (very often following immediately upon the first) is that professionalism is not well-defined. Though described as very important, articles quickly add that “there is little clarity within the health education literature on the definition of professionalism” (Aguilar et al. 2011), that “Professionalism is a complex phenomena (sic) that is difficult to articulate and is easily confused and contested” (Bateman et al. 2019), that “there is no overarching conceptual context of medical professionalism that is universally agreed upon” (Birden & Usherwood 2013), that “it is not well defined either methodologically or conceptually” (Challen et al. 2016), that it is “difficult to define” (Field et al. 2009, Kelly et al. 2016), that “professionalism in the field of dental hygiene has not been defined or adequately examined” (Nagatani et al. 2017), that “Ambiguity in understanding what “professionalism” means, and uncertainty in how best to teach it, remains” (Hawick et al. 2017), that “the many definitions of professionalism found in the literature lack content and
differ significantly” (Karches & Sulmasy 2016), that professionalism is often treated as “a case of you know it when you see it” (Kelly et al. 2016), “easy to recognize but difficult to define” (Monrouxe et al. 2015), suffers from conflating concepts (Martimianakis et al. 2015), that it has “no clear explanation in the literature” (Robinson et al. 2012), with no emerged “unifying theoretical or practical model” (Birden et al. 2013), that it is a conceptually “difficult construct to define (Tiffin et al. 2011), that “there is a risk that the list-based definitions [of professionalism] will obscure the foundational purpose of professionalism” (Papadakis 2015), and that a review of the medical education literature revealed that medicine lacks both a definition of professionalism and a consensus concept” (Deloughery 2018). Birden (2014) summarizes it well: “After so much debate and publication, one could expect that the definition and important attributes of professionalism would be well codified by the end of the first decade of the 21st century, but there is ample evidence in the literature to suggest that the reverse is true...and as yet no overarching conceptual context that is universally agreed upon ....”

Part of the concern about the unclear definition of professionalism is a straightforward issue of there being a consensus that something is important and required of the curriculum to value, teach, and assess, while at the same time having no consensus on the content of that something. How do we know what to teach? When to teach it?

Not surprisingly then, if somewhat ironically, what most articles that alert the reader to the lack of a clear definition of professionalism then go on to do is develop some sort of definition or characterization of professionalism that could be used in teaching or evaluation. Interestingly, the plethora of attempts to do this seem not to have led to a consensus in the published literature, although when looking at the issues from a far enough distance, it appears that there is more of a practical framework for teaching and measuring professionalism than is realized.

There are a number of ways that different researchers approach the definitional task. One approach references descriptions of professionalism promulgated by professional and educational healthcare organizations. For example, the Accreditation Council for Graduate Medical Education (ACGME) characterizes professionalism as “demonstrating compassion, integrity, and respect; being responsive to patient needs; and accountability to patients, society, and profession” (Byyny 2017, p. 10). Kelly (2016) comments on the American Board of Internal Medicine (ABIM) Foundation, the American College of Physicians Foundation, and the European Federation of Internal Medicine, who jointly published a set of professionalism principles focused on the three areas of patient autonomy, welfare, and social justice, saying that professionalism in radiology and medicine should include the ABIM’s key elements of “accountability, altruism, excellence, duty, honor and integrity, and respect for others”, a claim also supported by Shrank (2004). The American Medical Association (AMA 2021) states “A physician shall uphold the standards of professionalism, be honest in all professional interactions, and strive to report physicians deficient in character or competence, or engaging in fraud or deception, to appropriate entities.” The Liaison Committee on Medical Education (LCME) standard 3.5 says: “A medical school ensures that the learning environment of its medical education program is conducive to the ongoing development of explicit and appropriate professional behaviors in its medical students, faculty, and staff at all locations. The medical school and its clinical affiliates share the responsibility for periodic evaluation of the learning environment in order to identify positive and negative influences on the maintenance of professional standards, develop and conduct appropriate strategies to enhance positive and mitigate negative influences, and identify and promptly correct violations of professional standards.” (LCME 2021). Notice the differences between these three, with the ABIM emphasizing other-regarding principles of welfare and social justice along with physician virtues, the AMA emphasizing self-policing of fraud or deception, and the LCME emphasizing behaviors with no reference to specific professionalism virtues or principles. In addition to professional organizations, researchers have studied the professionalism statements of healthcare training institutions (primarily medical schools). Deloughery (2018) examined the websites for all 144 LCME-accredited medical schools in the US for statements of
professionalism and found that the general statements were categorizable into 4 framings (Integrity, Behavior, Respect, Excellence) with the remaining 3 categories of mixed, unclear, or absent. Analysis by region showed “Integrity remained the most popular framing among all geographic regions. The Midwest had the highest proportion of schools with Behavior and Unclear framings, the Northeast the most Respect framings, the West the most Excellence framings, and the South the most Mixed and Absent framings.”

The second approach relies on definitions of professionalism developed by particular scholars and authors. Stern is often cited, with a focus on demonstrating professionalism “through a foundation of clinical competence, communication skills, and ethical understanding, upon which is built the aspiration to and wise application of the principles of professionalism: excellence, humanism, accountability and altruism.” (Stern 2006.) However, authors often follow up these general definitions by laying out subcomponents or specific principles and responsibilities, seeming to take the general statements as inspiring rather than specific guides (Ludwig 2014).

The third approach performs quantitative studies using surveys of healthcare students and practicing professionals to determine such things as the most important attributes of role models (Silva et al. 2019), preferred practices among medical students in pedagogical methods for learning professionalism standards (Cusimano et al. 2019), searches of published literature to determine the frequency of elements of professionalism discussed (Van de Kamp 2004), behaviors most commonly described by healthcare instructors as unprofessional (Ziring 2018), ratings of the severity of professionalism lapses using vignettes (Hultman et al. 2012), and rankings of the most important elements of professionalism (Sullivan et al. 2014). Rarely, there are also quantitative studies of specific professionalism policies seeking to determine if specific behaviors (such as turning in assignments late) were affected (Shtaynberg et al. 2013). A similar study was performed at UMMC for the previous QEP (class of 2011) that dealt with incorporating professionalism into and across the didactic curriculum. An online survey was sent to approximately 8,000 UMMC students, staff, resident physicians, and faculty and 250 recent alumni. A total of 1,465 people responded to the survey representing a cross section of staff, students, faculty, and administration. The results are summarized as follows: “Among all respondents, honesty and integrity were rated most highly as important characteristics or behaviors in the UMMC learning environment with 99.5% of respondents ranking this characteristic as very or extremely important. This was followed closely by professional ethics (98.8%), respect for colleagues (98.3%), and working effectively as a team (97.4%). Other factors that fall under the heading of professionalism that were ranked as very or extremely important by over 90% of respondents included having ethical role models, effective verbal communication, and modeling ethical behavior. This grouping of highly-ranked intrinsic values was consistent across all schools and all disciplines” (UMMC QEP Main Document 2011).

The fourth approach, more common than quantitative studies, utilizes qualitative studies. Typically, a researcher will collect a large number of narrative writing samples from healthcare students and/or faculty, including reflection papers on clinical experiences (Kaldjian et al. 2012, Santen 2011, Karniela-Miller 2010, Karniela-Miller 2011), Case Observation and Assessments (COAs) (Kaldjian et al. 2012), open-ended questions on surveys (Byszewksi et al. 2012, Rindflesch et al. 2013), and responses to clinical vignettes (Kulaylat et al. 2017) and conduct thematic analysis on the language in order to characterize what respondents think professionalism is, what the most important parts of professionalism are, and what the most common examples of professional and unprofessional behavior are. In addition to written reflections and observations, a number of qualitative researchers also do thematic analyses of interviews (Hawick et al. 2017, Schafheutle et al. 2012, Gardeshi et al. 2018, Del Prato 2012, Monrouxe et al. 2012) and content analyses of focus group discussions (Wagner 2007, Robinson et al. 2012, Mustika & Soemantri 2020, Monrouxe et al. 2012).
Though not necessarily categorized as a fifth approach, it should be noted that some researchers look at the definitional question from a negative or apophatic approach, searching for characterizations of behaviors and attitudes that are not professional. Studies include identifying the severity of professional misconduct (Hultmann et al. 2012), which faculty behaviors count specifically as uncivil (Ballard et al. 2018), open-ended responses to questions of what most taught students about professionalism (revealing negative examples and role-models were often most important) (Karniela-Miller et al. 2010), and observations of unprofessional behaviors in clinical training (Santen & Hemphill 2011).

Commonalities of the Approaches
One common message drawn from the literature review is that in spite of the concern over the difficulty of defining professionalism, there is, nonetheless, a common tactic taken by a variety of researchers. The recurring theme is that professionalism is multi-dimensional but can be broken down into what can be described as a set of macrolevel groupings, a set of midlevel groupings, and a set of microlevel groupings. The macrolevel groupings are the broadest categories of the types of things that professionalism includes and apply generally to everyone in the healthcare/sciences profession (such as competent knowledge of one’s field). The midlevel groupings are the qualities associated with professional behavior that could be applied variably in a wide range of situations (typically including virtues such as respect or integrity). The microlevel groupings are the specific actions an individual takes in order to comply with professional standards in discipline-relevant situations or that simply provide examples of the possession or lack of the midlevel qualities (and typically include behaviors that both satisfy professional requirements as well as train a person in the attitudinal, virtuous, and behavioral habits of a professional, such as “performs comprehensive and problem-focused physical examination”).

Macro-level Categories
At the macrolevel, the survey of the literature (and the literature survey for UMMC’s previous QEP) suggests a useful way to conceptualize the broadest groupings of professionalism as divided into knowledge, behaviors, virtues, and identity. This allows for clarity on the multidimensional nature of professionalism and points the way toward desired student learning outcomes and assessment.

Knowledge. Knowledge refers to information about the principles of healthcare ethics (e.g., non-maleficence), definitions of ethics, definitions of concepts related to professionalism (e.g., integrity, respect, honesty), familiarity with organizational statements about professional expectations, and the healthcare/scientific information that one must know in order to effectively diagnose and treat patients or run experiments. All this information is largely dealt with in the didactic curriculum (though, of course, learning continues throughout one’s training). The knowledge part of professionalism is largely what UMMC’s previous QEP dealt with—developing the “professionalism across the curriculum approach” and altering the curriculum to better educate and promote professional goals. It is the other (following) categories of “Professionalism in Practice” that are the target of the new QEP.

Behavior. Behaviors refers to actions that conform with professionalism goals at the externally observable level. This can range from rather general elements such as “being honest”/“telling lies”, exemplified by particular behaviors, to very specific requirements such as “submits paperwork within 12 hours of assignment” or “wears white coat during initial examination”.

Virtues. Virtues refers to excellences of character that have been practiced and internalized to such an extent they form an integrated part of a person’s personality—thus including attitudes, social skills, and reasoning skills. Classical virtues such as justice, courage, honesty, and self-discipline may be important for any truly successful human social practice (Karches & Sulmasy 2016) but virtues identified as important for healthcare practice include the more specific, such as being respectful of confidentiality, humility, punctuality, succinctness, and patient-centeredness and for scientific research include curiosity, perseverance, objectivity, skepticism, and meticulousness (Nature Career Brief 2016). A key element of a virtue is not only that it is an excellent level of a particular attitude and habitual behavior, but as fully
incorporated into the individual’s personality and habits, it is a good indicator of how the person will behave in new situations and contexts (Macammon & Brody 2012).

**Identity.** Identity refers to a sense of self, group-membership, and social role in which individuals think of themselves as not merely a person who does certain types of healthcare or research work but as a person who *is* a physician, nurse, therapist, scientist, dentist, etc. This is related to virtues but springs directly from a sense that the individual’s role in society as well as their sense of self is tied together. In many ways, it is the development of identity that makes for the importance of “profession” in professionalism. One is not simply a knowledgeable, skilled, virtuous person-in-general but is also knowledgeable, skilled, virtuous, and committed to the work and role that the historical professional holds as central (this is the function of the white-coat ceremony, which ritually connects students with who-they-now-are more than simply the acquisition of a degree).

All four of these categories are important but they are not separable in composing a true professional, even if they are separable conceptually and in terms of teaching and assessment. As pointed out in some qualitative studies, a person with excellent technical skills and high levels of knowledge may nonetheless fail in professionalism by being lazy or arrogant (Challen et al. 2016).

**Midlevel Categories**
The midlevel categories are where we tend to get descriptions that include attitudes, values, approaches, and character traits. In addressing the difficulty of defining professionalism, this is where quantitative publication surveys and qualitative student studies tend to pick out concepts as being more or less commonly related to the notion of professionalism, some studies through surveys of existing literature and assessment instruments, some through surveys of healthcare students and faculty. Sometimes these concepts are further defined, often they are not.


Less common but notable traits include independence, confidence, collaborativeness, confidentiality, putting patients first, punctuality, and self-discipline (Challen et al. 2017, Deloughery 2018, Field et al. 2010, Gale-Grant et al. 2013, Nagatani et al. 2017, Mustika & Soemantri 2020, Santen et al. 2011, Van de Camp et al. 2005). Note that simply being in the “less common” category does not imply that these traits are less important. Many of these lists were drawn from thematic analysis of writings and many of the writers who mentioned “respect” may intuitively include traits such as “punctuality” or “confidentiality” in that category. Another possible example of this is the trait of being “competent”. Though “competency” showed up in fewer studies as a signal aspect of professionalism (Gale-Grant et al. 2013, Hsieh et al. 2019, Mustika & Soemantri 2020, Van de Camp et al. 2005) it is very likely that if specifically asked, anyone would include technical competency as a necessary quality of being a professional. Wagner et al. (2007) explicitly notes this in a study of multiple stakeholder groups, stating that everyone assumed competency to be a required aspect of professionalism. It may also be the case that healthcare and science students are less likely to come across flagrant examples of incompetence in their practical studies and are more likely to notice and mention failures of respect, integrity, and accountability.
This salience effect is suggested by respondents in studies who focused on lapses of professionalism and on the frequency of the type of ethical misconduct they observed. For those respondents, common observed character failings include laziness, arrogance, carelessness, denying personal responsibility, lapses of confidentiality, lapses in informed consent, uncollegial behavior, disrespectfulness, liberality in prescribing narcotics, lying, and poor teamwork (Challen et al. 2017, Fard et al. 2010, Karnieli-Miller et al. 2011, Santen et al. 2011).

Finally, it is worth noting that some traits rarely appear in the published literature about the essence of professionalism but show up noticeably in studies of what healthcare and science students, faculty, and patients actually found important (note that the patient perspective is rarely studied in the literature). These include an emphasis on personal hygiene and personal appearance (Deloughery 2018, Finn et al. 2010, Gale-Grant et al. 2013, Van de Camp et al. 2005, Ahmed et al. 2020). Also, in one interesting study that looked at the perception of professionalism in four groups—faculty, residents, students, and patients—researchers found that while all four groups emphasized compassion and other character virtues, faculty uniquely mentioned “maturity” as a professional trait, residents uniquely mentioned “decisiveness” as a professional trait, and patients uniquely mentioned the value of humor and being “down to earth” (Wagner et al. 2007).

**Microlevel Categories**

Microlevel categories are much more specific instances of the kinds of behaviors that exemplify the midlevel traits characterizing professionalism.

Though not technically reducible simply to behavior, microlevel categories often boil down to specific actions that indicate (or are thought to indicate) that the agent possesses or lacks a particular professional virtue. Sometimes these are explicitly identified as “things to watch for” in behavioral assessments of professionalism. Sometimes these are simply the memorable instances that an evaluator may note or remember in deciding whether a student has demonstrated a particular quality. For example, the concept of “respect” is the most common quality to appear in studies of perceptions of professionalism. If we use the macrolevel category of “virtue” as the broad rubric and “respect” as the midlevel specification of one of the virtues that is required, then the microlevel category of “makes derogatory humorous remarks about a patient among colleagues” would be a test instance of that virtue. Students who do make such remarks are likely to be judged as disrespectful and thus lacking in a professional virtue.

It is important to realize that microlevel categories are the place where judgments about a person’s character are made. No one is generically seen as being respectful or compassionate or honest or uncollegial or selfish. One must engage in particular behaviors in particular situations to be so judged. A laboratory student who fabricates data in an experiment is demonstrating that they are not honest or trustworthy or that they lack integrity. A nursing student who sits with a patient past their work shift in order to raise the patient’s spirit is demonstrating compassion (probably). Specific instances are the data points on which broader assessments are based.

Depending on the specific discipline, however, some specific behaviors are so important that they merit explicit articulation in order to establish quality control or to strengthen the habits of professionalism. For example, one professionalism assessment item might be “takes a thorough medical history of the patient during the first examination” or “wipes down the vent-a-hood thoroughly with alcohol and activates the UV disinfectant lights overnight”. While it is not possible to produce explicit rules for every occasion (this is why we have general principles and midlevel virtues), there will be a need at times to emphasize a very specific action in order to engrain the habit.
At other times, it will be incumbent upon a supervisor or teacher or other role-model to clarify for a student that some particular behavior is an example of a midlevel professional standard violation. While a faculty member may take it for granted that turning in an assignment late is disrespectful or undisciplined or selfish, a student may have been acculturated to think little of it (and in fact, our own institutional data shows that the top unprofessional behavior as reported by residency program directors is lateness). It is here that the student needs to be told that a particular behavior counts as being dishonest, or compassionate, or insensitive, or shows integrity.

There may be disagreement, however, with what counts as a professional or unprofessional behavior. This is where perception studies can be useful. For example, Ballard’s et al. study (2018) of what is perceived as uncivil behavior among dental students and faculty showed that faculty members thought not providing students with their lecture powerpoints did not count as very uncivil/unprofessional whereas students considered it highly unprofessional—more so than arriving to clinic late or leaving clinic early. Students saw socializing with groups of students outside of class as unobjectionable, but faculty saw it as fairly unprofessional. Faculty saw “subjective” grading as unobjectionable; students saw it as highly uncivil.

In terms of assessment, it may be important that either specific behavioral instances are asked about or that if an evaluator does score an evaluatee low or high on some trait, that they give a behavioral instance to explain their score. For example, instead of simply giving a score on “integrity” an evaluator may be asked specifically if they have witnessed the evaluatee lie to a patient (Biagioli et al. 2012) or instead of given a global score on “accountability” an evaluator may be asked if they have ever witnessed a radiology student pass along an image of poor quality insisting that “they can still read it” (Challen et al. 2017).

While the initial definition of professionalism used in the development of the QEP (the active adherence to the norms, values, and ethical standards of one’s professional community) is still useful, it became clear that these norms and values included elements of knowledge, behavior, virtues, and identity, which are distinct but inseparable.

Assessment
A fourth message about the problems of defining professionalism concerns the effect of assessment on the concept. Assessment is, of course, important itself, and programs and organizations need ways to determine whether their training attempts succeed in promoting professionalism or not. However, given that professionalism involves a number of distinct phenomena, from attitudes to behaviors, to beliefs, to skills, to character traits, there is no simple way to globally assess it. Instruments that assess behavior are the easiest to implement and appear the most objective, but do not get at the motivations for the behavior (Aguilar et al. 2011), which make it difficult to predict that such behaviors will be applied in other settings (Crossley et al. 2002). Behavioral assessments are also particularly subject to the Hawthorne effect, whereby those evaluated temporarily improve their behavior as a result of being observed (Farah-Franco et al. 2017, Kelly 2018b) or even deliberately feign appropriate responses (van Mook et al. 2009). As a typical example in ethical theory exemplifies it, a boy scout who helps an elderly person across the street in order to be seen and praised by his observing scoutmaster has performed the same behavior as an unobserved boy scout who helps an elderly person across the street because he thinks it is the right thing to do, but for very different reasons that predict different behaviors in the future in different contexts. Whereas behavioral assessments may be too superficial and low in predictive power, however, values and virtues are harder to assess, though probably more predictive. Attitudes are more approachable with assessment scales but more complex in their structure than behavior (Aguilar et al. 2011). The upshot of this is that the desire to quickly assess can limit the definition of professionalism to something superficial and therefore to fully accommodate the multi-dimensional nature of professionalism, assessment must itself be multi-dimensional.
Best Practices
The application of best practices to professionalism is, unfortunately, not direct. While there is a general consensus that some practices are related to promoting professionalism, there is generally a paucity of evidence-based guidelines for how to actually promote it and thus a need for intervention-based studies (Papadakis 2015). Our QEP, therefore, is not only directed toward the benefit of UMMC students but should provide some useful information for the research on professionalism.

While there is no clear evidence-based set of demonstrated best practices, there are major themes that appear in the literature that merit investigation. Five themes in particular stand out.

Role Models and Reflective Practice
First, there is the emphasis on role models (Pfeil 2015) and reflection. Many articles and studies emphasize the effect of role models on the developing healthcare professional or scientist, both in terms of the primary pedagogical method using in practitioner contexts and in terms of what students report are the most influential forces on their sense of professional identity and behavior. This would suggest that a way to promote professionalism is to get all the clinical/laboratory supervisors and other related staff to behave in purely professional ways and to express purely professional attitudes. For reasons discussed in the learning outcomes section above, this would be an impracticable goal, although some effort can be made to raise awareness of the importance of the hidden curriculum and the influence of role models. What is more practicable is to get students to more critically and reflectively evaluate the practitioner context they are in, and the people who are teaching them, so that they become more aware of professionalism successes and failures and more capable of a sustained metacognitive distance between what they believe should be done and what they see being done. The idea here is not to train students in some sort of “generic resistance to role modeling” (Holmes et. al., 2015) but rather to train students in the habit of noticing and analyzing modeled behavior and attitudes so that they become not merely passive receivers and imitators of the good or bad models but become active critical thinkers who can step back and make judgments about who to emulate and who not to emulate. This would provide students with the experience of greater autonomy and self-discipline that would hopefully develop into a critical thinking habit they could take with them to any new context. It is about the development of the student as an active life-long professionalism learner rather than merely being an imitator of their current context. What appears to be the consensus on best practices associated with the development of these skills and habits are formal requirements for reflection. Sandars’ (2009, p. 685) very definition of reflection highlights it as teaching a skill that can be transferred into new contexts: “A metacognitive process that occurs before, during and after situations with the purpose of developing greater understanding of both the self and the situation so that future encounters with the situation are informed from previous encounters.” Various reflection training methods, such as written reflections on professionalism experiences and role models, group discussion reflections and conversations on professionalism experiences and role models, and formal requirements to assess teachers, supervisors, and other students using the same professionalism instruments that they themselves are assessed by (not for reporting these assessments to any institutional body but for the experience of attending to professionalism) are available for use.

Assessment Applicability
Second, there is the value of a student’s being assessed for their professionalism by others and receiving a useful, interpretable set of ratings. One popular, though labor intensive, method is the 360° Feedback. This method collects assessments from a wide variety of people who may observe the student in the practitioner environment, including supervisors, teachers, peers, clients, patients, and other staff. The goal in business settings is to provide the employee and the HR staff with a broad set of information that covers behaviors and attitudes from a wide set of perspectives. What appears to be the best practice associated with this is a consistent assessment rating tool (which can be created through many existing survey generators) that is filled out by multiple observers at multiple levels within a short time of the
practitioner project (e.g., clinical rotation). While a true 360° feedback is too labor intensive for our purposes, we will have multiple feedback sources because every student will be evaluated by their experiential learning supervisors (ranging from 3-8 per year) and each student will also provide a self-evaluation.

**Multimodal Approach**

Third, there is the claim that since professionalism entails a variety of elements (as discussed above), including knowledge, behaviors, virtues, and identities, the teaching of and assessment of professional need to be multi-dimensional or multi-modal and attempt to promote and capture all these elements. The contrast here is to methods of assessment that only provide global, undetailed ratings on particular professional qualities (such as “respects others” or “is competent”) and to methods of assessment that only evaluate students for directly observable behaviors. While behaviors are crucial, they are a superficial and limited way of assessing professionalism because they are subject to the Hawthorn effect, because they do not get at the underlying attitudes and character traits that motivate the behavior, and because they do not provide insight into the student’s sense of identity. What appears to be the best practice then is a portfolio method of assessment and habit-formation that includes didactic training (knowledge), assessment scores (behavior), virtues and attitude assessment instrument scores (virtues and identity), and gradable reflection exercises (virtues and identity) (Saavedra 2015).

**Perception and Seriousness**

Fourth, there is a strong suggestion in parts of the literature that students perceive professionalism training and assessment as merely a hoop to jump through or a box to tick off and do not take it seriously (Birden & Usherwood 2013, Pinto-Powell & Lahey 2019). Provided a student commits no serious professionalism lapses, they are good to go and thus professionalism is seen as a minor part of medical or scientific education. In order for this not to be the case, what appears to be best practice is that students receive a professionalism grade of some sort that is taken seriously (Shrank 2004). In order to be taken seriously, it must be possible for a student to succeed and score well on all their science and knowledge-based courses and qualifying tests and yet still fail to receive a degree because they have not demonstrated an acceptable level of professionalism. To be seen as truly a required part of being a physician or scientist or nurse, professionalism must be truly required. That which is not graded will not be taken seriously.

**Summary of Implications**

These literature reviews informed our choice of QEP topic and QEP design in the following ways: First, the topic is important, both on a profession-wide level and on an institutional level. Second, professionalism is problematic, in both the sense of being associated with troublesome outcomes and in the sense of not being easily defined and quantified. Third, the large-scale categories of professionalism include knowledge and behavior (which are the easiest to teach and measure, respectively) but also include crucial elements of character and identity. Fourth, the best set of approaches to teaching and assessing professionalism is likely to be multimodal. Fifth, there is a need for interventional studies, which is relevant to professions themselves but also to the future modification of UMMC’s own curriculum and culture. Sixth, the most pragmatic approach to increasing levels and durability of professionalism is likely to be student-centered rather than institution-centered, given the wide variety of professional contexts and given the value of developing a student’s character and habits for functioning in those diverse contexts.