

Committee on Committee Report

6-1-18

Executive Summary

“Commitment” is one of the core themes for our curricular reform effort. While it intrinsically resonates with all involved, the Committee on Commitment was first tasked with defining Commitment in the context of medical education and the characteristics we expected of our graduates. A variety of topics were elicited from the curriculum retreat, the AAMC national meeting, and committee member input. The list was distilled down to the following topics.

1. Intrinsic motivation
 - a. Self-determination theory
 - b. Self-directed learning
 - c. Wellness and resilience
2. Advocacy and service learning
3. Mentorship and role modeling
4. Professionalism
5. Learning environment and mistreatment
6. Altruism
7. Professional identity formation

Two to three group members were assigned to each topic and presented to the committee. This process resulted in the following recommendations and suggested pilot programs/activities.

Commitment Committee Recommendations

1. Emphasize small group based, longitudinal, self-regulated learning
2. Early clinical based learning which will enhance self-directed learning
3. Train a core group of faculty to deliver curriculum [S1] and serve as mentors
4. More explicitly identify and reward positive role models
5. Improved collaboration between UME, GME, and faculty to improve the learning environment
6. Work with admissions to identify students with a strong basis in ethical decision making and professionalism
7. Work with students upon matriculation on developing learning skills appropriate for a learning environment that supports commitment to medicine
8. Explicit emphasis on areas of development that we often assume happen (e.g. altruism, professional identify formation, resilience, etc.)
9. Required longitudinal service-learning project with a focus on social determinants of health, health disparities, advocacy, etc.
10. Frequent use of self-reflection exercises

Suggested Pilots

1. Value-based career choice coaching model for professional identity formation that uses self-reflection in a small group setting.
2. Longitudinal service-learning project for DH LIC students^[SJ2]
3. Implementation of CU Flourish or alternative resilience curriculum via ACP
4. Longitudinal measurement of self-directed learning skills and attitudes¹
5. Partnership with OPE on “wall of recognition” for professional excellence.
6. Pre and post assessment of sense of empathy and ethical behavior in medical students for impact of interventions²

¹Premkumar, Pahwa, *Acad Med* 10-13

²Neumann, Edelhauser *Acad Med* 8-11

Commitment Subcommittee Summary Report

1. Purpose of the committee

Our committee has focused on how we can promote the principle of “commitment” in our future graduates. We identified seven key areas to address that would foster commitment.

8. Intrinsic motivation
 - a. Self-determination theory
 - b. Self-directed learning
 - c. Wellness and resilience
9. Advocacy and service learning
10. Mentorship and role modeling
11. Professionalism
12. Learning environment and mistreatment
13. Altruism
14. Professional identity formation

For each of these topics, we: 1) reviewed best practices based on the literature and other schools, 2) reviewed what we already do at University of Colorado School of Medicine, 3) developed suggestions for curriculum reform, using a “Blue Sky” approach, 4) identified potential pilot projects, 5) identified potential outcome measures, and 6) discussed how to address diversity and inclusion.

2. Review of best practices or at least alternative practices

Intrinsic Motivation (Self-determination theory, self-directed learning, wellness and resilience)

Higher intrinsic motivation has been correlated with higher grades in pre-clinical and clinical years in some studies. Several schools have moved towards small-group, case-based learning (OHSU, Emory) to promote self-directed learning. It is important to provide dedicated time for students to spend on exploring a topic/subject that they are interested in learning more about. Many schools include a scholarly experience (ie Duke) that allows students to pursue dual degrees, research, health policy, travel, etc.

We reviewed the literature regarding burnout, resiliency and wellness. Multiple schools have wellness programs, including: 1) Georgetown: Mind Body Medicine Program; 2) Harvard: Wellness Initiative & Task Force, Wellness Student Interest Group, Thrive App (optimizes awareness and access to supports and resources related to health and wellness); 3) Mass General: Benson-Henry Institute for Mind Body Medicine (stress reduction groups, resiliency training, etc.) 4) Stanford: 27 wellness electives across 10 specialties; Office of Medical Student Wellness nested under Student Affairs and a Student Wellness Leadership Team that leads wellness programs for their peers.

Advocacy and Service Learning

Thirty-four schools have curricula in service learning. The literature includes overlap between service learning, longitudinal integrated clerkships, community engagement, advocacy, social determinants of health, leadership with common goals of health equity, link with community

and social accountability. Service-learning can be a conduit for professional identity development.

Best practices for service-learning include: 1) anchored in goals, objectives and competencies; 2) aligned with curriculum and assessment; 3) Supt learners in positions of responsibility; 4) robust project mentorship including community non-MD leadership; 5) development of institution-community partnerships with strong institutional support.

Mentorship and Role Modeling

We reviewed research on mentorship. Key findings from this review included that mentorship is important in advancement within school, career preparation and selection, choice of academia, job satisfaction, and productivity. There is a paucity of research on comparing effective forms of mentorship and most schools lack a formal system for assessing efficacy.

A mentoring relationship: 1) Focuses on achievement or acquisition of knowledge; 2) Consists of emotional and psychological support, direct assistance with career and professional development, and role modeling; 3) Is reciprocal, where both mentor and mentee derive emotional or tangible benefits; 4) Is personal in nature, involving direct interaction and 5) Emphasizes the mentor's greater experience, influence, and achievement.

Based on a qualitative study, learners felt that things that had a positive impact on mentorship included goal clarity, spontaneous relationship, mentee-focused, mentee-directed, accessible, confidential; things that were associated with negative views included assigned relationships, mentor-focused, lack of chemistry; barriers included time, lack of recognition for mentor, unclear options.

Learning communities promote commitment in many ways, including mentorship, role modeling, advising and professional identity formation. As part of Vanderbilt's learning communities, they have a Careers in Medicine program that is a student-run program with faculty advisors, focus on career exploration, provision of useful resources, student-student mentoring and assists in preparation of residency applications.

There are "hidden steps" in positive role modeling. There is an exposure phase, when the student observes the doctor's clinical expertise, relationship with students, patients and colleagues and their personality. Then there is an evolution phase, when the student assembles, emulates, experiments, adapts and assimilates to incorporate into their own practice.

Professionalism

We reviewed the definitions and literature. There are no cohesive curricula at other schools and no defined assessments. Emory has a program that includes professionalism including Tibet Compassion training that includes students, residents, faculty and leadership. Teaching professionalism entails setting expectations, providing experiences, and evaluating outcomes

(Stern DT, Papadakis M. NEJM 2006). Assessment is particularly lacking. Most of the focus has been on “codes of behavior” and tend to focus on negatives.

Learning Environment and Mistreatment

Data on mistreatment is primarily from the AAMC GQ. 38% of students nationally report mistreatment, and CU has consistently been above the mean. Mistreatment is correlated with higher burnout, stress, anxiety etc. in addition to a poor learning environment. CU has had a task force involving students for several years and we have seen an improvement in mistreatment, but progress seems to have plateaued. Faculty, residents, students, staff can be victims or perpetrators. More work has been done at CU with students and faculty and less with GME.

The University of Vermont has a “Director of the Learning Environment” and a dedicated website with guidance on reporting mistreatment as well as a description of how concerns are addressed. The University of South Florida has video vignettes to foster discussion about learning environment/mistreatment. SUNY Upstate has an ethical action exercise. The University of Vermont has a learning environment webpage and reports both concerns and exemplary behaviors.

Altruism

The group reflected on commitment and altruism are “on two sides of the same coin” and therefore embraced the definition of altruism by Thomas Nagel, an American philosopher. He defines altruism as “A willingness to act in the interests of other persons without the need of ulterior motives”. This encompasses how altruism should be understood in the context of medicine. There is a positive association between altruism and empathy, which leads to improved patient relationships and improved clinical outcomes. In contrast, we want to avoid the definition as “self-giving” or “detriment to self”, since this can be associated with burnout. The literature suggests that one of the most important ways to integrate altruism into medicine is by emphasizing it in the admissions process. During admissions, interviews can be used to determine whether prospective students truly demonstrate altruism and can use tools like CASPer to assess how applicants react to difficult situations. During medical school, students are taught altruism primarily through positive role models. In addition to promoting positive role model relationships, time for self-reflection is also key. This reflection allows students to explore their emotions and values throughout their clinical experiences. Finally, the culture of the medical school itself is also very important in helping students develop altruism. For example, focus on rankings and board scores can be “anti-altruistic.”

Professional Identity Formation

This is the process of moving from student to doctor and transitioning to doctor as “we”, rather than “they.” It happens even if we do not do anything, so we need to decide our role. It typically happens at times of disequilibrium when they need to realign. It cannot be taught in a

lecture, rather it is based on experiences and relationships. There are two methods commonly used to facilitate professional identity formation: 1) reflection with feedback and 2) role modeling.

Cooke calls for reform to promote professional identity formation that includes formal activities, reflection and feedback, support for learner and teacher relationships, exploration of roles of physician-citizen and creating collaborative learning environments committed to excellence and continuous improvement.

We noted how professional identity formation linked to several of the other key areas that support commitment, including: 1) **role models** have an enduring impact (both positive and negative) that impacts identity formation; 2) a stronger sense of belonging to a profession is associated **with increased coping, decreased burnout and increased life satisfaction**; 3) students learn to conceive of patients as diseases or educational opportunities; if we want students to be **patient-centered**, then we must integrate training opportunities that develop this identity; 4) identity formation is related to discover of personal potential and purpose in life. Pursuit of potential and life purpose is related to **intrinsic motivation and self-determination**. Pursuit of life purpose is related to greater life satisfaction and **well-being**. Fulfillment from contributing in personally meaningful ways is basis of **commitment**.

Other schools have curricula and/or focus on professional identity formation including: 1) Reflective writing (Brown, UCSF, Columbia, UTMB); 2) Learning communities (Vanderbilt, UCSF, Michigan); 3) Coaching (Oregon, UTMB, UCSF); 4) Resilience training (Brown, Rochester); 5) Service learning (UTMB) and 6) Dedicated time for professional identity formation (UCSF--ARCH weeks—assessment, reflection in health).

3. Aspects of CUSOM curriculum that currently addresses purpose and should be maintained

Intrinsic Motivation

Individualized learning goals in several clerkships (ICAC, HAC), LICs and PBL and small groups and flipped classrooms promote self-directed learning. Eliminating honors in Phase I and 2 will promote intrinsic motivation. Resilience and Wellness Council Initiative with wellness representatives for each class with the goal to consolidate opportunities that are available to students, acting as student voice for curriculum reform committees and perform a needs assessment. There are existing student electives in medical improvisation, CAM wellness, charting your career path and mindful living.

Advocacy and service learning

Service learning opportunities exist in urban underserved track and the DAWN Clinic. Required service learning activities in Rural and Community Care Clerkship (community service learning project with reflection), Denver Health LIC (annual group service learning project with reflection and debrief), Colorado Springs Branch (8 month clinical and community leadership curriculum, PEAK Project team linked with community partner and community showcase). Elective service learning activities in LEADS,

CU Unite, mentored scholarly activities. Advocacy activities (more for individuals rather than at the population level) include IPED2, ILMC, RCC and C-STAR.

Mentorship and role modeling

Existing mentorship opportunities include: 1) Advisory Colleges with faculty and MS4 advisors; 2) Foundations of Doctoring preceptor; 3) Mentored Scholarly Activity; 4) Specialty Advisors; 5) Session on identifying mentors during ICC; 6) Tracks and 7) Longitudinal Integrated Clerkships.

Existing role modeling opportunities and recognition include: 1) Foundations of Doctoring preceptor, including Golden Stethoscope recognition; 2) Problem-based learning facilitator; 3) MS3 and MS4 clinical rotations; 4) Gold Humanism recognition and 5) Hidden Curriculum sessions.

Professionalism

Office of Professional Excellence currently focuses on “low performers” but would like to shift bell curve and recognize “high performers” and boost positive behaviors.

There are existing aspects of our curriculum that promote professionalism including peer evaluations in PBL, professionalism cases, professionalism competencies on clinical evaluations and professionalism awards.

Learning environment and mistreatment

Task force led by Dr. Lowenstein and students has been in place for several years with good results. A “next steps” document has been created and much of the work has been passed on to the Office of Professional Excellence. We developed definitions of mistreatment and suboptimal learning environment. We have a 5 minute orientation tool regarding mistreatment. Other interventions to minimize mistreatment include Student Professionalism Council, hidden curriculum, Student-Faculty Collaboration via Medical Student Council, Advisory Colleges, Professionalism cases. Challenges to our learning environment include normative grading, marginalization of students, inadequate workspaces and computers.

Altruism

There is no specific instruction on altruism in our current curriculum. Personal interactions with patients/families promote altruism, including in the M2M patient visits, Donor Memorial Ceremony, Cadaver as First Patient essay, patient visits in Blood and Lymph and CVPR.

Professional identity formation

Existing experiences that support professional identity formation include Advisory Colleges, hidden curriculum sessions, reflective writing, opportunities in Foundations and PBL. However, these are not fully integrated and not all students are included. We currently gather some data on identity formation, specifically, students complete the Professional Identity Scale. This does not change significantly over

time and there is a wide range of results. We have not looked at the relationship between identity formation and burnout yet.

4. Recommendations

Develop a curriculum that supports the three principles of self-determination theory, including autonomy, relatedness and competence

- Time and flexibility to pursue individual interests to support self-directed learning
- Spiral or Z curriculum that allows gradual exposure and greater mastery
- Integrate more clinical, case-based learning
- Clinical exposure early that increases relevance and value
- Greater independent patient responsibilities
- Move away from lecture-based curriculum delivery and more towards self-regulated learning with models like small groups, flipped classroom, PBL and TBL
- Promote longitudinal relationships with faculty and patients
- Student development on how to be effective self-regulated learner
- Have entering students identify motivations and revisit them regularly in the context of what they are learning
- Optimize new note writing role for students given CMS changes to decrease marginalization of students

Make professional identity formation an explicit part of our curriculum

- Recognize that students have an identity and need to integrate prior identity with newer identity. Deliberately plan for this evolution, especially at key transitions
- We should be deliberate so our graduates develop a strong identity that includes the values that we have deemed important at CU (leadership, curiosity and commitment)
- Encourage students to specifically think about who they are (values, morals, goals) and how that relates to the field of medicine and their identity as a physician
- Promote longitudinal relationships with faculty, patients/families
- Continue and enhance the hidden curriculum
- Develop a portfolio to capture experiences, reflections, evolution of identity
- IPE is critical, but need to consider the most appropriate timing—is it important to develop as a physician first and then work with others?
- Required longitudinal service-learning project with a focus on social determinants of health, health disparities, advocacy, etc.)—should start early and sustain across curriculum, be team-based and inter-class, need to provide faculty including community mentorship and financial support for project, faculty and staff (could be incorporated into Advisory Colleges)

Incorporate reflection (with feedback) and storytelling into entire curriculum to promote commitment, including relatedness, empathy, professional identity formation, role modeling, altruism

Continue and enhance Advisory Colleges

- Establish best practices from national cohort of colleges (Learning Communities Institute)
- Increase one on one contacts with students and develop specific plans
- Expand the use of text based advice system, Lean on Me
- Integrate CU-Flourish or similar programs (wellness, resilience, mindfulness, grit, values, joy and gratitude) into the curriculum and involve core faculty in a train the trainer model
- Long term goal of expanding the ACP role in curriculum

Develop a more deliberate and formal process for mentorship and role modeling

- Master coaches, advisors and educators with special training and compensated time
- Introduce mentorship early on and assist in “match making”
- Provide tips for mentors and mentees (can use “Do’s and Don’ts from Rose et al.) and use worksheet to help students identify mentors and set goals (use “Checklist for Mentees” from Zerzan et al.)
- Identify career advisors for every specialty

Adjust our admissions model to identify learners who will thrive in our new environment that focuses on reflection, self-directed learning, wellness and resilience, service learning, diversity and inclusion

- As already planned, use CASPer and MMI
- Recognize the socioeconomic factors that may influence a pre-medical student’s ability to participate in meaningful service (i.e. under-represented in medicine applicants may have less mentoring, less service opportunities)
- We need to encourage diversity amongst interviewers as well as applicants
- Increased emphasis on professionalism, ethical character, emotional intelligence at admissions

Promote “positive” role models and professionalism, enhance the learning environment and decrease mistreatment

- Reporting should support positive behaviors and recognize positive role models
- Electronic gratitude “wall” to recognize high performers of professionalism
- Should develop professionalism curriculum that is part of a culture change, with a cohesive curriculum thread, institutional synchrony and multidimensional assessment
- Need to include GME since residents play such a crucial role in teaching and role modeling for our students
- Develop a standardized code of conduct that includes students, residents, faculty, administration
- Curriculum on mistreatment/learning environment across all 4 years that includes video triggers and scenarios to foster discussion between students, residents, fellows and faculty including collaborative meetings and grand rounds
- Confidential site and department liaisons at all sites and within all programs to monitor and promote a positive learning environment, including some centralization to minimize silos that handle mistreatment
- Need to support a culture of making mistakes, promote team-based root cause analyses of issues, examine environmental stressors leading to behaviors

- Develop a program of faculty and resident development to promote teaching, feedback, professional behavior, ethics, mentorship and role modeling
- Incorporate reflection for teachers and learners to identify positive role models and promote professional identity formation and professionalism
- Make explicit the “hidden steps” in role modeling, promoting the exposure and evolution phases
- Provide support for managing “negative” experiences
- Provision of institutional support for teaching (administrative and financial) and allocation of sufficient teaching time
- Formal institutional recognition of dedicated clinical teachers

5. Suggested Outcome measures/ Evaluation of program

Our committee discussed the results of several surveys already administered to our students to measure burn out, mistreatment and mentorship. We should continue to track this data as we make changes to our curriculum. We also identifies several validated tools that could be used to assess outcomes of our proposed changes, including: 1) self-assessment of self-directed learning; 2) 360 degree evaluations of students that include professionalism; 3) Professional Identity Scale; 4) Mentorship Effectiveness Scale; 5) Mentorship Profile Questionnaire.

If we institute CU Flourish, there are specific outcome measures, including the Maslach Burnout Inventory, Positive and Negative Affect Schedule, Cognitive and Affective Mindfulness Scale, Perceived Stress Scale, Subjective Rating of Sleep Quality, Toronto Empathy Questionnaire and Valued Directions Questionnaire.

We could also perform qualitative assessments of our students to explore the impact of these changes on their professional identity formation, altruism, patient-centeredness, the impact of mentors and role models, and wellness and burnout.

Since many of the “commitment” focus topics are areas that have not been focused on for curriculum development and assessment at other schools, we have an opportunity for scholarship at CU, if we can document our curricular changes and outcomes.

6. Pilot ideas and next steps

- Value based career choice- coaching model for professional identity formation that uses self-reflection in a small group setting.
- Longitudinal service-learning project for DH LIC students
- Implementation of CU Flourish or alternative resilience curriculum via ACP
- Longitudinal measurement of self-directed learning skills and attitudes¹
- Partnership with OPE on “wall of recognition” for professional excellence
- Pre and post assessment of sense of empathy and ethical behavior in medical students for impact of interventions²

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