

University of Michigan  
Internal Medicine Residency  
Longitudinal Learning Objectives



Written as a joint effort  
by the Program Director and Associate Program Directors  
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# **The University of Michigan Internal Medicine Residency Longitudinal Curriculum: A RESIDENT'S GUIDE TO LEARNING**

Your residency faculty created this longitudinal curriculum to guide your professional growth as you develop from learners into leaders. We believe that each Michigan resident has the potential to lead. Our goal is to provide you with necessary skills not only for the practice of internal medicine but also for the challenge of medical leadership. Whether you seek to lead in clinical care, education, research, or advocacy, we are committed to your success. As a resident, you are not a “student”; you are an active adult learner. Your experiences stimulate you to learn through personal study, reflective thought, collegial discussion, and progressively independent decisions and actions. This curriculum serves to guide your active learning.

As future clinical leaders, you are challenged to plan for and provide the highest quality of clinical care. To lead in an increasingly complex environment, both generalists and subspecialists must be firmly grounded in basic and clinical science knowledge, with advanced ability to critically appraise new information. The Michigan curriculum provides comprehensive clinical training across the breadth of internal medicine in primary care and subspecialty settings, allowing Michigan graduates to feel comfortable with complex cross-disciplinary patient care. Residents must develop communication skills essential for clinical leadership, as providers must not only form therapeutic relationships with patients and their families, but also create effective partnerships with physician and allied healthcare colleagues. Clinical leaders must partner within a team environment to anticipate and adapt to healthcare changes; they must call upon clinical systems to achieve desired patient-centered outcomes.

Educational leadership requires a broad skill set founded upon a firm understanding of educational process and learning methods. Educators must promote self-directed learning, empowering learners and modeling self reflection. Advanced communication skills allow educational leaders to promote a learning environment for physician peers as well as junior learners. The Michigan internal medicine residency seeks to train educational leaders who proactively adapt to changing educational challenges, develop innovative educational strategies, and display high levels of altruism and empathy to meet the needs of diverse learners.

Many Michigan residents seek a career in research leadership, producing peer reviewed publications in their chosen field. While our residency promotes the scientific skills essential to performing research, we understand that successful research leaders also have advanced skills in communication and critical appraisal. Leading investigators must seek peer reviewed funding for research activities, present results at national and international conferences, and communicate results to individuals outside their chosen field. These scientific and

interpersonal skills also allow investigators to rise to positions of leadership where they may review grant applications from other investigators, appraising the significance of proposed investigations.

Residents at the University of Michigan often seek to be leaders as advocates for patients, social justice, and public policy. To impact change in complex environments, residents must learn about resource allocation, cost effectiveness, special interest organizations, and healthcare policy. Our program seeks to help residents develop effective skills for communication with a wide array of audiences, and to learn fundamental principles that form the foundation for advocacy. This compilation of knowledge and skills prepares Michigan residents to advance the well-being both of individual patients, and of those in society whom they may never meet.

Keeping in mind your career leadership potential, this longitudinal curriculum establishes learning objectives for your progressive development, setting standards for evaluations, and therefore benchmarks for training promotion eligibility. The longitudinal curriculum provides the foundation that underlies individual block rotation curricula and the longitudinal teaching plan.

The University of Michigan endorses teaching and evaluation of the Accreditation Council for Graduate Medical Education (ACGME) General Competencies:

- 1) Patient Care [things you do],
- 2) Medical Knowledge [information you know],
- 3) Practice-Based Learning and Improvement [how you learn to do better],
- 4) Interpersonal and Communication Skills,
- 5) Professionalism, and
- 6) Systems Based Practice [how you work within the healthcare system].

The Michigan longitudinal curriculum comprises six competency curriculum documents. Each document describes our objectives for a single ACGME General Competency over all three training years. We believe that progressive achievement of these training objectives provides residents with the skills necessary to excel as clinicians, educators, researchers, and advocates. These documents provide clarity of expectations and guidance for reflective consideration.

We hope that while periodically reviewing these documents you will find reward in acknowledging your strengths while addressing your opportunities for improvement. We wish all residents joy and self-discovery as you fully engage in your profession, achieving excellence while leading the future of internal medicine.

## I. Patient Care

**ACGME Goals: “Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:** learn the practice of health promotion, disease prevention, diagnosis, care, and treatment of men and women from adolescence to old age, during health and all stages of illness.”

University of Michigan Learning Objectives:

- a. Health Promotion and Disease Prevention
  - i. HO1 residents will demonstrate attention to health promotion through application of preventive principles in the ambulatory care setting, ensuring their continuity patients receive recommended screening tests and other preventative practices.
  - ii. HO2 residents will effectively engage patients in behavioral and clinical care discussions. They will counsel patients about health-affecting behaviors, medical tests and treatments. They will recommend screening exams as appropriate for patients’ needs in both continuity and non-continuity settings.
  - iii. HO3 residents, in addition, will consistently partner with all patients and their families to promote health in individuals and populations. They will treat all patient encounters as opportunities for health promotion and disease prevention education. They will demonstrate effective secondary and tertiary prevention skills necessary for effective chronic care management. They will recognize limitations of guidelines in application to individual patient needs, and will adjust their recommendations appropriately.
- b. History taking
  - i. HO1 residents will consistently gather accurate and relevant historical and emotional information, organize the information according to medical convention, and chart it in a timely and efficient manner. By completion of HO1, histories will be hypothesis driven; residents will use history gathering as an opportunity to create a patient-focused care environment.
  - ii. HO2 and HO3 residents will in addition efficiently collect complex historical information from written, electronic, and oral sources. Collected information will be accurate, verified, and prioritized. Residents at this level will demonstrate ability to integrate accurate collected information into succinct historical narratives that inform and prioritize both differential diagnoses and diagnostic plans.
- c. Physical Examination
  - i. HO1 residents will identify normal from abnormal and elicit critical findings using common examination maneuvers.
  - ii. HO2 residents, in addition, will correctly detect subtle findings. They will teach appropriate physical exam skills to junior learners.
  - iii. HO3 residents, in addition, will strive to perform a focused physical

exam at a level similar to a sub-specialist, and will understand the sensitivity and specificity of maneuvers.

d. Clinical Judgment

i. HO1 residents will

1. develop prioritized differential diagnoses, diagnostic plans, and therapeutic plans for common inpatient and ambulatory conditions;
2. correctly identify acute conditions requiring urgent intervention;
3. recognize when patient presentations deviate from common patterns, requiring supervisory assistance for complex decision making; and
4. under supervision, assess and respond to recommendations derived from consulting services and requests from referring healthcare services, integrating prior data with current clinical assessments to generate appropriate diagnostic and therapeutic plans.

ii. HO2 residents will, in addition,

1. demonstrate recognition of the performance characteristics of commonly used diagnostic tests, incorporating appropriate clinical judgment to make diagnostic decisions in the setting of imperfect data;
2. regularly incorporate consideration of risks and benefits when considering diagnostic tests and therapies;
3. independently generate diagnostic and therapeutic plans for all acute and chronic care settings; and
4. by completion of HO2, demonstrate ability to manage urgent care needs with minimal supervision.

iii. By completion of HO3, residents will in addition

1. demonstrate appropriate reasoning in ambiguous situations, interfacing evidence based medicine with expanded clinical judgment to guide efficient diagnostic and clinical plans;
2. rapidly and independently diagnose and manage common urgent conditions;
3. disseminate diagnostic and management skills to junior trainees, modeling appropriate clinical judgment and effective decision-making;
4. consistently establish monitoring procedures and demonstrate ability to change therapeutic plans for ineffectiveness or adverse side effects; and
5. Practice quality palliative care, and provide information on palliative and/or hospice care opportunities for patients for whom that may be a preferred option.

e. Procedures

- i. HO1 residents will demonstrate knowledge of procedural indications, contraindications, necessary equipment, process for

handling specimens and patient after-care. They will participate in informed consent, assist patients with decision making, and attend to patient comfort. They will complete mandatory program minimums for procedural competency in breast/genitalia exams, PAP smear, rectal exams, paracentesis, phlebotomy and IV access, and arterial blood gas sampling. All procedures will be appropriately documented.

- ii. HO2 residents will additionally demonstrate extensive knowledge and be facile in the performance of procedures while minimizing risk and discomfort to patients. They will assist junior peers in skill acquisition.
- iii. HO3 residents will complete all mandatory minimums for procedural competency prior to graduation, following program administrative requirements.

f. Skill Synthesis

- i. HO1 residents will earn an overall competent rating during a Clinical Evaluation Exercise. Areas of deficiency identified within an overall competent rating will be remediated and subsequently performed satisfactorily.

## II. Medical Knowledge

**ACGME Goals: “Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Residents are expected to:** learn the scientific method of problem solving, evidence-based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.”

University of Michigan Learning Objectives:

- a. Knowledge of biomedical, clinical, epidemiological and social-behavioral sciences, the scientific method of problem solving, and evidence-based decision making:
  - i. HO1 residents will
    1. demonstrate satisfactory knowledge of common medical conditions, sufficient to manage urgent complaints under supervision;
    2. by completion of HO1, exhibit sufficient knowledge to provide care for common medical conditions with minimal direct supervision;
    3. satisfactorily complete a minimum of 80% of assigned JHILC ambulatory modules
  - ii. HO2 residents will in addition
    1. demonstrate progression in knowledge of pathophysiology and clinical biosciences as necessary to develop appropriate differential diagnoses and diagnostic plans for complex multi-problem patients;
    2. demonstrate understanding of socio-behavioral issues, cultural competency, and fundamentals of medical ethics;
    3. demonstrate correct interpretation of basic biostatistical principles, including sensitivity, specificity, predictive values, likelihood ratios, number needed to treat, odds ratios, and statistical significance;
    4. demonstrate knowledge of the impact of study design and study methods on validity or applicability to practice; and
    5. pass USMLE Step 3.
  - iii. HO3 residents will additionally
    1. demonstrate growing knowledge content appropriate for their chosen career path; and
    2. reflect maturing knowledge of the breadth of internal medicine, with ability to address content across the generalist and subspecialist spectrum.
- b. Demonstration of a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values:
  - i. HO1 residents will

1. exhibit self-motivation to learn, expanding their socio-biological knowledge base through independent case-based learning; and
  2. demonstrate knowledge of evidence-based medicine and library sciences sufficient to develop PICO questions and access medical decision support.
- ii. HO2 and 3 residents will additionally
1. regularly display self-initiative to stay current with new medical knowledge, new patient resources, and new medical controversies; and
  2. demonstrate understanding that the accomplished medical professional must engage in a breadth of knowledge spanning not only the biomedical sciences but also the socio-behavioral sciences, including but not limited to healthcare economics, medical ethics, and medical education.

### III. Practice-based Learning and Improvement

**ACGME Goals: “Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:** identify strengths, deficiencies, and limits in one’s knowledge and expertise; set learning and improvement goals; identify and perform appropriate learning activities; systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement; incorporate formative evaluation feedback into daily practice; locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems; use information technology to optimize learning; and participate in the education of patients, families, students, residents and other health professionals.”

University of Michigan Learning Objectives:

- a. identify strengths, deficiencies, and limits in one’s knowledge and expertise; set learning and improvement goals; identify and perform appropriate learning activities; and incorporate formative evaluation feedback into daily practice:
  - i. HO1 residents will
    1. understand personal limitations, ask for help when needed, and admit to medical errors;
    2. seek and accept formative feedback;
    3. complete self evaluations and develop reflective plans for personal improvement;
    4. independently explore curricular resources available to enhance skills in areas of relative weakness;
    5. use consulting services to improve self-knowledge, appropriately integrating expert consulting opinion based on personal learning activities and independent reading;
    6. deliver care that demonstrates learning from previous experiences; and
    7. review autopsy findings for reflective learning.
  - ii. HO2 and HO3 residents will additionally
    1. voluntarily seek supervised learning opportunities for procedures not yet mastered; and
    2. demonstrate continual identification of personal learning opportunities, recognizing that all patient care interactions present opportunities for case-based learning and improvement.
- b. systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement
  - i. HO1 residents will
    1. attend M&M conferences, quality improvement conferences, and patient safety conferences; and

- 2. participate in program quality improvement initiatives.
- ii. HO2 residents will additionally
  - 1. analyze personal continuity practice systematically, seeking to improve care for both individual patients and patient populations;
  - 2. submit a reflective exercise regarding an adverse event for formative feedback as part of the patient safety curriculum (see also the curriculum on Systems Based Practice); and
  - 3. compare personal practice patterns to larger populations, seeking to improve unexplained personal practice variation.
- iii. HO3 residents will additionally provide leadership for residency-directed quality improvement educational initiatives both in the ambulatory and inpatient settings.
- c. locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems; use information technology to optimize learning
  - i. HO1 residents will
    - 1. demonstrate self motivation to acquire new knowledge;
    - 2. access University clinical resources, library resources, and web-based resources to locate evidence necessary to support patient-centered decision-making.
  - ii. HO2 residents will additionally
    - 1. independently and voluntarily use Pubmed or Ovid to locate scientific evidence necessary to enhance patient care;
    - 2. with assistance, appraise and assimilate scientific literature ;
    - 3. demonstrate understanding and use of evidence-based medicine principles in providing patient care
  - iii. HO3 residents will additionally
    - 1. independently apply knowledge of study design and statistics to critical appraisal of relevant literature in clinical settings;
    - 2. formally lead critical appraisal of a journal article for peers and faculty in the Journal Club setting; and
    - 3. reflect understanding of the limits of protocol and guideline-derived management, incorporating patient-centered shared decision making with applicability of care evidence.
- d. participate in the education of patients, families, students, residents and other health professionals
  - i. HO1 residents will
    - 1. facilitate learning of medical students and peers; and
    - 2. participate in education of patients and families through provision of accurate and appropriate information.
  - ii. HO2 residents will additionally
    - 1. facilitate education of other health care professionals, using interactions with other professionals as two-way educational opportunities;

2. promote group learning experiences through active participation and facilitation of assigned ambulatory care discussion modules;
  3. treat consultation services as opportunities for shared education between physicians; and
  4. identify an area of research interest and a research mentor in order to engage in the scholarship of scientific inquiry and dissemination
- iii. HO3 residents will additionally
1. contribute to dissemination of scientific knowledge through presentation of a formal didactic for resident peers, a research poster presentation, or a presentation at a scientific meeting (including the residency's Research Day).

## IV. Interpersonal and Communication Skills

**ACGME Goals: “Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:**

communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds; communicate effectively with physicians, other health professionals, and health related agencies; work effectively as a member or leader of a health care team or other professional group; act in a consultative role to other physicians and health professionals; and, maintain comprehensive, timely, and legible medical records.”

University of Michigan Learning Objectives:

- a. Communication with patients, families, and the public
  - i. HO1 residents will
    1. demonstrate ability to establish rapport with patients from a variety of backgrounds;
    2. demonstrate ability to elicit patient-centered and physician-centered information necessary to inform an accurate medical and social history;
    3. engage patients or their advocates in therapeutic relationships that support shared decision making for uncomplicated diagnostic and therapeutic decisions;
    4. provide timely responses regarding continuity and other ambulatory care, including test results and queries;
    5. participate effectively in family meetings, demonstrating active listening skills for topics such as end of life care;
    6. provide patient education in the continuity setting, using effective communication as a means to build the doctor-physician relationship; and
    7. exhibit nonverbal communication skills that enhance physician-patient interactions.
  - ii. HO2 residents will in addition
    1. under guidance, engage patients in shared decision making for ambiguous or controversial scenarios;
    2. under supervision, compassionately communicate serious diagnostic or prognostic information to patients and families;
    3. under supervision, lead communication during family meetings;
    4. engage patients and their families or advocates in decisions in the end of life setting including discussions regarding options for care;
    5. demonstrate expanding skill in communication across the cultural spectrum; and
    6. successfully negotiate most “difficult” patient encounters, such as the irate patient.

- iii. HO3 residents will in addition
  - 1. with minimal direction, engage patients in shared decision making for ambiguous or controversial scenarios;
  - 2. successfully engage in shared decision making in multi-cultural contexts;
  - 3. successfully negotiate nearly all “difficult” patient encounters with minimal direction; and
  - 4. with minimal supervision and acting as a role model for junior learners, compassionately communicate with patients and families regarding sensitive topics, including serious diagnostic and prognostic findings and end-of-life care options.
- b. Communication with physicians, other health professionals, and health related agencies; interpersonal function as a member or leader of a health care team or other professional group
  - i. HO1 residents will
    - 1. deliver appropriately succinct oral presentations of patients’ histories, physical examinations, laboratory data, assessments, and plans. Presentations will be hypothesis-driven, synthesizing knowledge for accurate transmission; they will be adjusted in length and format to situations ranging from brief conversations with colleagues to formal presentations at conferences. Presentations will include prioritized differential diagnoses, assessment of chronic problems, and hypothesis-driven diagnostic and therapeutic plans for each active problem;
    - 2. use succinct oral communication effectively with senior residents, attending physicians, and ancillary staff to facilitate coordination of patient care;
    - 3. pose clear queries to consulting services;
    - 4. provide complete oral and written patient hand-offs;
    - 5. form effective partnerships with nursing and other allied health professionals to facilitate patient care;
    - 6. under supervision, participate in communication with primary care referring physicians; and
    - 7. constructively communicate with administrative staff.
  - ii. HO2 residents will in addition
    - 1. facilitate communication between team members, including establishing expectations, overseeing patient care, ensuring participation in academic discussions, providing feedback to learners, etc; and
    - 2. ensure continuity of patient care through effective inpatient-outpatient provider communication.
  - iii. HO3 residents will in addition
    - 1. communicate effectively as a team leader, with decreasing reliance upon faculty physicians;

2. model and teach inter-professional communication skills for junior learners; and
  3. effectively model constructive communication when participating in professional societies, research meetings, and administrative settings.
- c. Communication as a consultant to other physicians and health professionals
- i. HO1 and HO2 residents will communicate their role as a consultant to the patient, identifying and supporting the primary care relationship. Under faculty supervision, they will accurately identify referring physician concerns and questions, and direct accurate and complete written documentation of consultative care back to the referring physician. Residents at this level will demonstrate appropriate consultative general medicine care for patients primarily cared for by non-medical services.
  - ii. HO3 residents will in addition strive to effectively serve as a consultant on subspecialty rotations under supervision, demonstrating effective written and oral feedback communication with requesting physicians.
- d. Written communication
- i. HO1 residents will
    1. create thorough and accurate hand written or electronic documentation that is legible, timely and congruent with medical standards;
    2. avoid use of disallowed or confusing abbreviations and nonstandard terms;
    3. accurately maintain electronic patient lists including problem lists, medication lists, allergy lists, and preventive care documentation; and
    4. interact with electronic medical records to create succinct, relevant, and accurate patient-specific notes.
  - ii. HO2 residents will in addition use electronic documentation as a tool for improved patient care. They will endeavor to produce concise documentation, emphasizing clarity and accuracy of the written record.
  - iii. HO3 residents will also demonstrate effective written scientific communication through posters, abstracts, teaching slides, manuscripts, grant applications, or other scientific communications.

## V. Professionalism

**ACGME Goals: “Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:** compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; respect for patient privacy and autonomy; accountability to patients, society and the profession; and, sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.”

University of Michigan Learning Objectives: [References: 1) Good Medical Practice – USA, draft 0.0. July, 2007. 2) Medical Professionalism in the New Millenium: A Physician Charter.The Medical Professionalism Project, 2004. 3) ABIM Milestones Project Interpersonal and Communications and Professionalism subcommittee report, 2007 (unpublished). 4) Snyder L and Leffler C for the Ethics and Human Rights Committee, American College of Physicians. Ethics Manual, 5<sup>th</sup> edition. Ann Intern Med. 2005;142:560-582.]

### a. Personal Professionalism

- i. HO1 residents will demonstrate a personal commitment to
  1. Honesty, integrity, and trustworthiness;
  2. Recognizing mistakes and notifying the supervising attending when mistakes are made;
  3. Self-care and self-preservation, including attention to duty hour limits, appropriate personal rest, and appropriate public health and infectious disease precautions;
  4. Personal accountability for daily clinical responsibilities;
  5. Administrative responsiveness, accepting personal responsibility for timely response to administrative tasks;
  6. Recognizing the scope of one’s personal capacity, including limits of duty volume and personal stress; and
  7. Seeking and accepting assistance from colleagues and supervisors for duties that exceed personal ability or capacity.
- ii. HO2 residents will additionally demonstrate a commitment to personal professional excellence by
  1. Maximizing personal engagement in learning opportunities that lead to continuous professional development;
  2. Promoting and facilitating personal responsibility behaviors for junior learners, emphasizing honesty, integrity, trustworthiness, and recognition of personal limits;
  3. Demonstrating and promoting timeliness in task completion, punctuality, and dependability; and
  4. Accepting personal responsibility for setting professional career goals and working with mentors toward setting and achieving career objectives.
- iii. HO3 residents will additionally

1. Demonstrate personal professional leadership by reflecting upon the above objectives in ethically or personally complex settings which challenge personal integrity and require reflective self assessment.
- b. Physician-patient professionalism
- i. HO1 residents will demonstrate
    1. Appropriate grooming, attire, and demeanor;
    2. Commitment to provision of quality care for patients of all cultures, beliefs, and values;
    3. Empathy and compassion toward all patients;
    4. Recognition of physician-patient behavioral boundaries, including the unethical nature of sexual contact between physicians and current patients;
    5. Commitment to relief of pain and suffering;
    6. Respect for the personal dignity of patients, including respect personal privacy during physical examination;
    7. Maintenance of patient confidentiality;
    8. Timely, open, and honest communication with patients and their designated advocates; and
    9. Disclosure of information regarding available care options including reproductive services, or transfer of such care to another physician as long as the patient is not compromised.
  - ii. HO2 residents will additionally demonstrate
    1. Compassionate response to issues of culture, age, sex, sexual orientation, and disability in patient care;
    2. Recognition and management of conflicts of interest (e.g. gifts, caring for close others) and understanding the moral/ethical considerations with respect to the patient
    3. Primary concern for the patient's needs, consistent with a fiduciary relationship;
    4. Routine incorporation of advanced care planning and selection of surrogate decision makers within longitudinal care for competent patients;
    5. Compassionate care for dying patients and their families; and
    6. Respect for informed consent as a shared decision making process.
  - iii. HO3 residents will additionally demonstrate
    1. Commitment to accessibility for patient care;
    2. Advocacy for individual patient needs;
    3. Advocacy and appropriate surrogate identification for patients who lack decision-making capacity;
    4. Counseling of patients regarding testing implications prior to ordering genetic tests, or referral to another provider qualified to provide full discussion;
    5. Under supervision, timely and full disclosure of medical

- error;
- 6. Commitment to provision of physical, psychological, social and spiritual support for dying patients and their families, including high quality palliative and hospice care; and
- 7. Leadership of compassionate team care that respects patient dignity and autonomy.
- c. Professional behaviors among colleagues
  - i. HO1 residents will
    - 1. Recognize that physicians have a responsibility for the safety and well-being of colleagues and staff;
    - 2. Recognize, respond to and report impairment in colleagues or substandard care;
    - 3. Treat colleague physicians and allied health professionals with respect through professionally appropriate communication that acknowledges the potential for professional differences of opinion;
    - 4. Demonstrate respect for colleagues through attention to timely response to pages, emails, duty hours logging, electronic chart completion, dictations, etc;
  - ii. HO2 residents will additionally
    - 1. Willingly provide coverage for sick/unavailable colleagues;
    - 2. Provide timely and constructive feedback to colleagues; and
    - 3. Constructively engage in class retreats, class meetings, and program discussions.
  - iii. HO3 residents will additionally
    - 1. Provide active leadership in activities that support the training institution, such as recruiting activities, committees, and training discussions;
    - 2. Participate as possible in specialty organizations which promote continuous professional development;
- d. Professional responsibilities to society
  - i. HO1 residents will
    - 1. Recognize that intimidation, discrimination, or harassment toward any person is unacceptable;
    - 2. Understand that ethical concerns are present regarding gifts (restricted or unrestricted) from pharmaceutical and medical device industries;
    - 3. Recognize disparities that exist in health care among populations; and
    - 4. Recognize that as a self regulated profession, medicine requires physicians to individually and collectively maintain and fulfill our professional duties.
  - ii. HO2 will additionally
    - 1. Under supervision, recognize and take responsibility for situations where public health concerns supersede individual autonomy, such as in the case of reportable illnesses or

- imminent harm;
- 2. Demonstrate dedication to the principle of prevention of error
- iii. HO3 will additionally
  - 1. Reflect understanding of honest billing, coding, and referral principles;
  - 2. Accurately represent patient conditions during determination of disability and applications for assistance;
  - 3. Uphold ethical and professional expectations of research consistent with institutional research board guidelines, including maintenance of meticulous data and conduct of ethically sound human subjects research;
  - 4. Publish accurate and reliable research results, with attention to appropriate authorship attribution criteria;
  - 5. Recognize that potential financial conflicts of interest (including speaker fees, consultative relationships, investments, etc) must be disclosed when appropriate, and that actions should be determined by the patient's best interest rather than any financial incentives experienced in the practice environment;
  - 6. Recognize that physicians must assist the greater public and policy makers in understanding and addressing causes of disease and suffering; and
  - 7. Reflect understanding that as future leaders of their chosen profession, they are expected to exhibit compassionate leadership in the greater society.

## VI. Systems-based Practice

**ACGME Goals: “Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:** work effectively in various health care delivery settings and systems relevant to their clinical specialty; coordinate patient care within the health care system relevant to their clinical specialty; incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate; advocate for quality patient care and optimal patient care systems; work in inter-professional teams to enhance patient safety and improve patient care quality; and, participate in identifying system errors and implementing potential systems solutions.”

University of Michigan Learning Objectives:

- a. work effectively in various health care delivery settings and systems, and coordinate patient care within the health care system,
  - i. HO1 residents will
    1. work well within a core clinical team of physicians, nurses, and allied health professionals involved in the direct care of their patients; and
    2. reflect awareness of social service resources.
  - ii. HO2 residents will additionally
    1. coordinate multi-specialty care;
    2. appropriately consult social workers and case managers for current patient care needs;
    3. understand roles and services provided by sub-acute rehabilitation, hospice, home care, and nursing facilities;
    4. effectively work with allied professionals in team settings such as family meetings and multidisciplinary rounds; and
  - iii. HO3 residents will additionally
    1. strive to provide leadership in management of complex multi-disciplinary care plans, acting as a team leader during interdisciplinary family meetings;
    2. manage care and care transitions across multiple delivery systems, including ambulatory, subacute, acute, LTACH, rehabilitation, and skilled nursing settings.
- b. incorporate considerations of cost awareness and risk-benefit analysis in patient and population-based care
  - i. HO1 residents will incorporate fundamental cost-effective considerations into care approaches, minimizing unnecessary care and unnecessary delays of care;
  - ii. HO2 residents will additionally
    1. understand the principles of DRG payment;
    2. demonstrate understanding of insurance systems, including Medicaid, Medicare, and local insurance options;

3. demonstrate awareness of drug costs, reflecting commitment to provision of cost effective therapy; and
  4. demonstrate awareness of common ambulatory medical care delivery systems, including visiting nurse care, ambulatory rehabilitation resources, social services, home hospice, transportation services, and alternatives to acute care hospitalization.
- iii. HO3 residents will additionally
1. appropriately contain costs and conserve limited resources while preserving high quality care;
  2. proactively consider potential continuing care needs at all stages of acute medical management; and
  3. appropriately utilize all alternate levels of care for maximal value and quality of care.
- c. advocate for quality patient care and optimal patient care systems; work in interprofessional teams to enhance patient safety and improve patient care quality; and participate in identifying system errors and implementing potential systems solutions
- i. HO1 residents will
1. demonstrate dedication to high quality patient care;
  2. demonstrate willingness to identify both system errors and potential solutions for the purpose of enhancing patient safety and quality of care; and
  3. effectively work with allied administrative and health care professionals to assess, coordinate, and improve patient care, using inter-professional partnering to improve health care system operations.
- ii. HO2 residents will additionally
1. access and implement services designed to provide quality care to high risk populations, including substance abuse treatment services and social work referrals;
  2. demonstrate ability to effectively guide continuity patients through complex health care systems;
  3. demonstrate awareness of healthcare disparities limiting quality of patient care across populations; and
  4. actively participate in patient safety improvement groups.
- iii. HO3 residents will additionally
1. partner with case managers and other providers to identify and act on improvement opportunities for the health system;
  2. recognize and appropriately refer patient safety concerns including at risk elderly, disabled and intimate partner violence, guardianship services, DPOA, and involuntary mental health needs; and
  3. identify and appropriately refer patients for home services.
  4. Lead at least one presentation for the residency's Patient Safety Curriculum.