



Department of Pharmacy

Oncology Residency Manual

July 2018–June 2019



Memorial Sloan Kettering
Cancer Center

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Memorial Sloan Kettering Cancer Center
Department of Pharmacy
Oncology Residency Program

MISSION STATEMENT

The Pharmacy Department at Memorial Sloan Kettering Cancer Center (MSK) is dedicated to the progressive control and cure of cancer through programs of patient care, research, and education. This has been MSK's mission since 1884.

PURPOSE

PGY2 pharmacy residency training builds on the foundations of pharmacy practice established during Doctor of Pharmacy (PharmD) education and the PGY1 pharmacy residency experience. The MSK PGY2 oncology residency provides residents with a 12 month learning experience that prepares them to function independently as a clinical pharmacy practitioner in oncology, to serve as a fully integrated member of a multi-disciplinary team, and to optimize medications used in the provision of cancer care. Residents who successfully complete a PGY2 oncology pharmacy residency at MSK will possess competencies that prepare them for future clinical, research or academic positions, leadership roles in oncology, and board certification in oncology pharmacy.

GOALS OF PGY2 ONCOLOGY PHARMACY RESIDENCY PROGRAM AT MSK

The main goals of this residency program are to:

1. Develop the residents' fundamental knowledge of oncology therapeutics and malignant disease states and build the clinical skills required to practice as an independent oncology clinical pharmacist.
2. Emphasize the role of continuous professional development through literature evaluation, didactic lectures, roundtable discussions, self-learning and continuous self-reflection.
3. Apply evidence-based guidelines and standards in tailoring treatment plans to optimize patient care and outcomes.

INTRODUCTION TO THE PGY2 ONCOLOGY PHARMACY RESIDENCIES

There are two PGY2 oncology residencies offered at Memorial Sloan Kettering. Both residencies are 12-month programs based upon the American Society of Health-System Pharmacists (ASHP) standards for PGY2 hospital pharmacy residencies and the ASHP Supplemental Standard and Learning Objectives for Residency Training in Oncology Pharmacy Practice. The residencies focus on development of special competence in clinical therapeutics for cancer, an introduction to clinical research as well as introductory experiences in the management of sophisticated pharmacy service programs. It is required that residents have already achieved a basic level of competence in institutional and clinical pharmacy practice. The specific development plan for each resident may vary in structure and area of emphasis based upon the resident's entering level of knowledge, skills, abilities and interests. In addition to meeting the requirements set forth in the ASHP's accreditation standard for postgraduate year-two pharmacy residency training, the resident must have previously completed an ASHP-accredited pharmacy practice residency (PGY1). The resident must provide documentation of successful completion of an accredited PGY1 residency prior to beginning orientation.

One of the residency programs focuses on therapeutics in adults. The first month is dedicated to orientation to MSK, the pharmacy department, and crash courses in oncology. Nine months are devoted to major rotations in patient care and the remaining rotations are focused on oncology medication policies and guideline development and research. The patient care rotations are divided into inpatient and outpatient experiences. These rotations consist of hematologic malignancies in bone marrow transplant, adult medical oncology (breast, gastrointestinal, gynecologic, thoracic, head and neck, melanoma, sarcoma and neuro-oncology). Other available rotations include pediatric oncology, pain, and palliative care. Investigational drug management, early drug development clinic, will also be offered to allow exposure to early phase clinical trials. The residents are actively involved in providing direct patient care and monitoring patients who have received chemotherapy.

The second PGY2 oncology pharmacy residency focuses on pediatrics. The first month is dedicated to orientation to MSK, the pharmacy department, and crash courses in oncology. Nine months are dedicated to learning experiences (rotations) providing direct patient care to children, adolescents, and young adults with cancer. Required rotations include inpatient learning experiences in hematology/oncology and bone marrow transplant, and ambulatory rotations in neuro-oncology, leukemia, lymphoma, bone marrow transplant, sarcoma, and neuroblastoma. There is also one required rotation on the adult

leukemia service to solidify the understanding of the treatment of hematologic malignancies. In addition to the direct patient care rotations, there are longitudinal learning experiences focusing on medication use policy, medication safety and quality assurance, pharmacy operations, leadership and clinical pharmacy administration, investigational drug studies, and research. Elective rotations permit the resident to expand abilities and skills in different areas of particular interest. Established elective rotations include pediatric intensive care unit, infectious diseases, long-term follow-up clinic, as well as spending additional time in previous rotations if desired. The pediatric resident may elect a rotation offered to the adult resident.

The specific program for each resident varies based on the resident's goals, interests, and previous experience. However, all residents are required to complete rotations in core subject areas considered to be essential to the oncology pharmacy practitioner. Elective rotations are available to permit the resident flexibility in pursuing individual goals.

Additional learning experiences aimed at producing well-rounded pharmacists include the completion of:

1. major research project related to oncology pharmacy practice
2. medication safety event assessment
3. medication use evaluation (MUE)
4. pharmacy operations longitudinal experience
5. leadership and clinical pharmacy administration longitudinal experience

In addition the residents are involved in several educational activities such as:

1. pharmacy grand rounds (continuing education)
2. case presentations
3. journal clubs
4. oncology didactic lectures
5. department newsletter (InPHARMatIon)

WHO'S WHO?

A number of individuals play key roles in the administration of the Oncology Pharmacy Residency program.

Pharmacy Director

Scott Freeswick

The Pharmacy Director justifies the importance of the residency program and supports the program for budget approval.

Program Director

Larry Buie, Adult Residency

Sherry Mathew, Pediatric Residency

The Residency Program Directors maintain responsibility for the residency program. This includes that the overall program and specific learning objectives are met, training schedules are maintained, appropriate preceptorship for each rotation or training period is provided and resident evaluations are conducted routinely and based on established learning objectives.

Program Coordinator

Manpreet Boparai, Adult Residency

Melissa Pozotrigo, Pediatric Residency

The Residency Program Coordinators support the Residency Program Directors in their responsibilities.

Additionally, the Residency Program Coordinators ensure proper documentation of resident activities. All activities should be documented in the PharmAcademic system, a software system provided by ASHP. They also assume a leadership role in program administration and program recruitment activities.

Preceptors

Valkal Bhatt, Manpreet Boparai, Larry Buie, Amelia Chan, Florina Chuy, Nina Cohen, Ryan Daley, Brian Del Corral, Lauren DeRespiris, Jackie Gomes, Brianne Dixon, Krisoula Horiates, Charlene Kabel, Michael Kellick, Amber King, Lauren Koranteng, Binni Kunvarjee, Josiah Land, Carmen Lau, Andrew Lin, Dazhi Liu, Bernadette Loughlin, Kathryn Maples, Sherry Mathew, Lisa Modelevsky, Raymond Muller, Adebayo Ogunniyi, Jeremy Pappacena, Tim Peterson, Kristen Poppiti, Melissa Pozotrigo, Anthony Proli II, Meagan Griffin Reinfreid, Samantha Reiss, Marco Scipione, Brian Seyboth, Laura Tang, Jennifer Thackray, Yvonne Wong, Shirley Yan, and Prakirthi Yerram.

Pharmacist preceptors develop and guide the learning experiences to meet the residency program's goals and objectives with consideration of the residents' goals, interests, and skills. The preceptors review the residents' performance, with a final written evaluation at the conclusion of each learning experience.

ONCOLOGY RESIDENCY PLAN FOR THE YEAR

The program is designed to allow the resident to experience various aspects of oncology practice, including inpatient, outpatient, and research. In order to meet the ASHP PGY2 oncology standards the program is divided into several key areas:

1. clinical rotations
2. projects
3. staffing and pharmacy operations

1. Clinical Rotations

Organized rotations provide the structure of resident training in various oncology settings. The residents are expected to consider the goals and objectives for each rotation as a foundation for their experience.

Residents are expected to perform independently and demonstrate proficiency in their rotations. The residency preceptors provide guidance and assistance to the residents and ensure that the goals set forth by the residents and the program are met. The preceptors also provide the resident with frequent evaluation of their progress, including a written evaluation at the conclusion of the rotation. Frequent, clear communication is the key to a successful resident/preceptor relationship. To maximize the learning experience, the residents are expected to personally inform the preceptor of all absences, schedule conflicts, or concerns that might arise during the month. Residents also prepare for topic discussions, read materials in a timely manner, and perform other tasks assigned by the preceptors.

The first rotation for pharmacy residents is pharmacy orientation. This rotation will be completed during the month of July. The following core rotations are two to four weeks in length and are required:

Required Rotations (Adult)

- bone marrow transplant (allogeneic and autologous)
- hematologic malignancies I: leukemia
- hematologic malignancies II: lymphoma
- oncology outpatient services: breast cancer
- oncology outpatient: gastrointestinal cancer
- oncology outpatient services: gynecologic cancers
- pediatric oncology
- early drug development clinic and investigational drug service

- infectious diseases
- medical oncology I: thoracic
- medical oncology II: neuro-oncology
- medical oncology III: head and neck/melanoma/sarcoma

Required Rotations (Pediatric)

- leukemia/lymphoma ambulatory clinic
- inpatient hematology/oncology
- neuroblastoma ambulatory clinic
- inpatient stem cell transplant
- pediatric sarcoma ambulatory clinic
- investigational drug service
- stem cell transplant ambulatory clinic
- inpatient leukemia - adult service

Elective Rotations

One-to-two-month electives are available toward the end of the year. These electives can vary between residents depending on future career goals.

Elective rotations may include repeating any of the required rotations above or a new rotation. Adult rotations may be taken by the pediatric resident based on interest.

Elective rotations include:

1. infectious diseases
2. multiple myeloma clinic
3. adult lymphoma clinic
4. adult leukemia clinic
5. adult BMT clinic
6. early drug development clinic
7. adult neuro-oncology
8. pediatric critical care

Rotation Schedule

A 12-month resident rotation schedule provides a framework for structured learning activities. Each resident will meet with their respective program director at the beginning of the year to form a plan

of development. This plan is presented to the Residency Preceptor Committee for evaluation and the residency director for approval.

Adjustments and changes to residents schedules are discussed at each quarterly development plan meeting; as the residents acquire additional knowledge, learning experiences and goals are intermittently reassessed. Residents may request to change or trade scheduled rotations. With the approval of the preceptors for each rotation involved, the change may be referred to the Residency Preceptor Committee for evaluation and the residency directors for approval.

2. Projects

Each resident is required to complete one major project throughout the residency year. The major research project is outlined below. Additional projects may include a medication safety event assessment and a medication utilization evaluation.

1. Oncology research project: This project is selected by the resident based on interest and preference. Data collection can only begin after a waiver is obtained from the Institutional Review Board. The tentative research timeline is provided at the beginning of the year to ensure residents remain on track for successful project completion. A project committee composed of the residency program director and the project research mentor assists residents with planning, implementing, analyzing and presenting the project.
2. Medication Safety Event Assessment: Through this assessment the resident will analyze a near miss event or medication error and provide strategies to prevent recurrence.
3. Medication utilization evaluation: The residents can choose one medication that needs to be evaluated. It is highly encouraged that the residents choose an antineoplastic or biological agent based on disease state interest.

3. Staffing and Pharmacy Operations

Consistent with the ASHP residency standards, each resident completes a staffing component during their residency. This practice component represents another learning opportunity within the framework of the oncology residency program.

This experience is crucial to the development of professional practice skills. The resident will become proficient in pharmacy operations, including all aspects of order verification, medication preparation and distribution. In addition, the resident develops skills in leadership and personnel management, and gains insight into process improvement issues related to chemotherapy preparation.

General Requirements

1. Each resident is licensed with New York State by October 1 of the residency year.
2. The residents should be active and timely in reporting to the program director in case there is a possible delay in licensure beyond the October 1 deadline. Any resident who is unlicensed by October 1 will continue their assigned staffing schedule and function as a technician. Each weekend after October 1 that the resident is required to staff as a technician, the resident must compensate for after licensure with equal staffing time as a pharmacist.
3. By November 1 if the resident remains unlicensed, the resident's overall performance to date will be reviewed and a decision will be made by the Preceptor Committee if termination is warranted. Alternatively a compensatory staffing plan will be approved.
4. Each resident is expected to practice as a pharmacist in a designated pharmacy satellite throughout the residency year.
5. The residents staff these areas:
 - a. adult oncology (clean room)
 - b. pediatric oncology (M9 and R5 clean room)
 - c. inpatient floors (M10, M12, and M16)

The adult resident is required to work one weekend per month and one evening per month. The weekend shift is eight hours and starts at 8:00 AM and ends at 5:00 PM. This applies to both Saturday and Sunday. The evening schedule begins at 5:00 PM and ends at 9:00 PM one day during the month. The pediatric resident is required to staff one weekend per month. Weekend staffing requirements are Saturday and Sunday from 8:00 AM to 5:00 PM.

During the staffing component the residents become familiar with all chemotherapy agents, checking, mixture, and handling of hazardous materials. In addition to the operational staffing component, residents will also be required to complete clinical responsibilities on the weekends such as medication reconciliation and completion of follow up from weekend clinical sign out. For adult residents, staffing is mainly in the chemotherapy clean room. This pharmacy satellite is dedicated to processing and dispensing chemotherapy agents to all the adult inpatient floors. This satellite is also responsible for

processing chemotherapy orders for some hematologic outpatient oncology clinics such as leukemia and lymphoma and bone marrow transplant. Pediatric residents work on the M9 satellite and the R5 Clean Room. The M9 satellite provides medications for the inpatient pediatric unit. For chemotherapy order processing and mixing, the pediatric resident spends time in the Pediatric Ambulatory Care Center (PACC) and the clean room as scheduling permits throughout the year. In addition to the operational staffing component, the residents is also required to complete clinical responsibilities on the weekends such as medication reconciliation and completion of follow-up from weekend clinical sign-out.

The residents must be licensed in New York State by October 1. The residents work as technicians until they obtain this license. Upon licensure, the residents are evaluated to assess preparedness for transition into a pharmacist role. If deemed competent, the residents work as pharmacists in the areas mentioned above. If residents are not licensed by October 1, they are required to work extra weekends later in the year to ensure a complete staffing experience.

If the adult resident prefers to have experience in pediatric oncology, some arrangements can be made to give the resident the opportunity to staff the PACC satellite and M9 satellite. In addition residents are encouraged to assess their own performance and to express any need in modifying the staffing to gain more experience. Other areas that residents might benefit from are the pharmacy satellites on different floors.

Duty Hours

The PGY2 Oncology Residency Program adheres to ASHP's duty hour policy. Duty hours are defined as all scheduled clinical and academic activities related to the pharmacy residency program. This includes inpatient and outpatient care, weekend staffing, and administrative responsibilities (e.g., meetings). Duty hours do not include reading, studying, and academic preparation time for presentations and journal clubs or hours that are not scheduled by the residency program director or a preceptor.

Duty hours are limited to 80 hours per week, averaged over a four-week period, inclusive of weekend operational and clinical staffing responsibilities. The clinical, operational and administrative responsibilities outlined within the residency program are structured to fall below the maximum duty hours throughout any four-week period.

RESIDENCY-RELATED COMMITTEES

1. Residency Preceptor Committee

The Residency Preceptor Committee is a standing committee of the Department of Pharmacy. It is composed of residency preceptors, residency program directors, residency coordinators, and the director of pharmacy.

The committee serves in an advisory capacity to maintain the quality and consistency of the residency program.

The committee provides a forum for preceptors to discuss common concerns, to develop additional learning experiences, and to promote new and innovative areas of practice. The committee meets on a monthly basis.

The specific functions of the committee include:

- continuous evaluation of the curriculum, goals, and objectives
- monthly evaluation of residents' progress
- evaluation and support of residency projects
- resident recruitment and selection
- provide program preceptors with preceptor development vignettes to highlight specific areas of improvement and enhancement of preceptor skills

Meeting minutes are distributed for approval prior to each meeting.

The preceptors periodically discuss the preparation plan for ASHP accreditation survey.

2. Research Committee

The committee is responsible for guiding residents, evaluating, and facilitating the completion of the project. This committee is mainly involved with the major research project of the year.

3. Medication Safety Committee

This committee is responsible for guiding the residents to complete the medication safety event assessment. This is a longitudinal learning experience under the preceptorship of the medication safety officer.

4. MUE Committee

This committee guides the resident in the medication utilization evaluation project. This is a longitudinal learning experience under the preceptorship of a staff member in drug policy management.

EVALUATION METHODS

The oncology residency at Memorial Sloan Kettering offers residents opportunities to obtain the knowledge, skills, and abilities required to become competent oncology practitioners. The specific program for each resident varies based upon interests and goals. During the year, the residents are evaluated by rotation preceptors, the program director, and the residents themselves.

The residents are required to meet with the rotation preceptors prior to the start of each new rotation, primarily to discuss and customize the rotation's goals and objectives so as to meet the specific needs of the resident.

Rotation Sign-Out Meetings

The previous preceptor, the resident, the upcoming preceptor and resident's mentor (optional) should have a common meeting to review the goals that need to be achieved in the next rotation and to identify the areas of improvement.

Methods for Rotation Evaluation

A review of the rotation specific objectives and resident objectives should be completed on the first day of each rotation. During the rotation, the residents meet with the preceptors on a regularly scheduled basis, as determined by the preceptors and residents. Any additional modifications to the rotation or its goals and objectives are also discussed. During the rotation there are midpoint and final evaluations. The midpoint evaluation is a verbal evaluation to communicate any areas for improvement and the final evaluation is a written evaluation documented in PharmAcademic. The final evaluation includes the resident's self assessment, preceptor assessment, learning experience assessment, and the preceptor's evaluation of the resident's progress during the learning experience. All evaluations will be based on learning objectives. All resident and rotation evaluations must be submitted through the PharmAcademic system.

Development plans are to be completed quarterly. It will be reviewed with the residency program director and emailed to all of the residents preceptors.

All documents related to rotations, learning activities, staffing, and research should be stored electronically in the shared folder.

HOLIDAYS, SICK LEAVE, ABSENCES

Residents, as a part of the professional staff of the department, are expected to assist with holiday coverage if needed.

- The following table highlights legal and floating holidays recognized by the hospital.
- Residents may be required to staff one holiday during the residency year at the discretion of the program director.
- Floating holidays are days when residents are expected to help the pharmacy department if needed.

Legal Holidays	Floating Holidays
Independence Day	Columbus Day
Labor Day	Martin Luther King
Thanksgiving	President's Day
Christmas Day	
New Year	
Memorial Day	

Paid Time Off

Each resident will accrue approximately five hours of paid time off per pay period (total of 15 vacation days). These hours may be used for the time when the residents are absent from work for illness, interviewing for a future position and personal leave or vacation. Residents are entitled to take five consecutive days off during the holiday season. If these five days are not taken during December, they can be taken at any other time upon request. Because the primary purpose of the residency is educational, it is not expected that residents use all of the time accrued during the residency year. Residents are limited to two days off during any one rotation. Additional time off during a rotation requires special review by the program director with a plan for how the days will be compensated. The residents are paid for time not used at the end of the residency.

All requests for time off must be approved by the residency program director. Requests should be submitted in writing.

The residents are responsible for arranging switches for all other vacation and time off during their regular scheduled weekend. Unlicensed residents are not eligible for schedule switches.

Sick Days

The residents must call or email the preceptor as well as the program director to inform them of any sickness. Residents who are sick are not expected to show up to work especially when they are on hematologic malignancy rotations and bone marrow transplant rotations. Residents who miss more than two days during a rotation should compensate for the absence; the preceptor and resident should agree on a plan that should be presented to the residency program director.

Residents who take more than two weeks off for any medical or family emergency issues must compensate at the end of the year. Family and Medical Leave Act papers have to be filed according to hospital policies and procedures. A residency program extension 4 weeks beyond the scheduled end of the residency year will require documented approval from the RPD and pharmacy director.

Absences

Residents who do not show up to a scheduled activity and do not notify the proper personnel of the absence are subject to counseling. This program has no tolerance for unprofessional behavior.

TERMINATION

Residents can be terminated from the program at any time during the year, after two documented counselings with no improvement. The preceptor committee conducts a formal evaluation of residents in November to address any possible case of termination early in the year. However, this does not remove the committee's authority to terminate a resident at any point after documented counseling.

TRAVEL AND PROFESSIONAL SOCIETY INVOLVEMENT

Residents completing the program at MSK are expected to develop and maintain an involvement in professional society activities on a local, state and national level. Involvement is critical to the development of the oncology resident and the achievement of professional and personal goals.

1. Residents should plan to join and assume an active role in the ASHP. Activities could include attending the midyear clinical meeting, volunteering their services to the society, or attending an orientation session for residents.
2. Residents should plan to join and assume an active role in the Hematology Oncology Pharmacy Association (HOPA). It is mandatory that the resident submit and present their oncology research project at the annual HOPA meeting.

As part of the residents' professional and personal development, travel and attendance at meetings on a national level is expected.

Funding for attendance at the ASHP midyear clinical meeting and HOPA is provided by the Pharmacy Department since the residents are required to attend these meetings.

CERTIFICATES

The following list of requirements must be met to ensure the successful completion of the PGY2 Oncology Pharmacy Residency Program. Residency certificates will only be awarded to residents completing all requirements. Documentation of progress and completion of these requirements will be assessed on a quarterly basis during the quarterly development plan meetings and at the end of the academic residency year.

1. receive a score of achieved on 80% or more of the program goals and objectives as defined in the ASHP Required Competency Areas, Goals, and Objectives for Postgraduate Year Two (PGY2) Oncology Pharmacy Residencies
2. completion of the residency research project
3. research manuscript in a finalized format suitable for publication submission
4. research abstract submitted and accepted for poster presentation at the Hematology/Oncology Pharmacy Association (HOPA) annual meeting
5. completed a MUE

6. completed all scheduled staffing
7. obtained the New York State license
8. completed at minimum the following presentations:
 - 1 ACPE accredited CE lecture
 - 4 Case or Didactic presentations
 - 3 journal clubs

ACTIVITIES

MEETINGS

To broaden and coordinate the residency experience, residents are requested to attend a variety of meetings throughout the year. These may be departmental meetings, pharmacy administrative staff meetings, Pharmacy and Therapeutic Committee (P&T) meeting, Clinical Council, Hospital Quality Assurance Committee meeting, Performance Improvement, Internal Review Board, meeting etc. The preceptor will assign meeting attendance at the beginning of the month. In other cases, the resident will be requested to attend a specific meeting by another preceptor in order to broaden the resident's educational experience or assist with the development of a project. Meeting times and locations will be announced at the beginning of each rotation. Only the P&T meeting is obligatory; residents are encouraged to spend most of their time devoted to patient care rather than attending meetings.

ADDITIONAL ACTIVITIES

1. Residency Program Director Meeting

The residency program director meeting is held periodically throughout the year. These meetings keep residents informed regarding progress and developments in the department, serve as a forum for didactic presentations of management topics, and broaden the residents' knowledge of professional issues. The leadership series is incorporated into these sessions.

2. Mentor/Mentee Monthly Meetings

During the beginning of the residency year residents are matched with a preceptor mentor to guide them throughout the residency and provide professional support and advice. The resident and mentor typically meet monthly, prior to the preceptor meetings, to discuss the resident's progress throughout the rotation. The mentor and resident will also meet prior to the ASHP midyear meeting to discuss potential job opportunities and provide professional guidance.

3. Interview of Future Residents

Residents participate in evaluating potential future residents. Their involvement may start as early as the ASHP midyear clinical meeting. Residents also may participate in scheduling the January and February on-site interviews.

4. Big Brother and Big Sister

In the spring of each residency year, following the results of the residency matching program, incoming oncology residents are assisted by current residents. Activities of the Big Brother or Big Sister include assisting with relocation and finding housing, licensure procedures, orientation, mentorship, and fellowship.

5. Volunteer Work (Natural Disasters or Bioterrorism)

In the event of a serious storm or natural disaster, the residents are called upon to assist with pharmacy operations wherever they may be needed. The residents should not only be available in these circumstances but also should volunteer their services. The residents are viewed as pharmacy employees and, therefore, have to respond to responsibilities quickly.

6. National Meetings

If residents are interested in attending any meeting other than HOPA and ASHP, a special request must be submitted to the program director to discuss the benefit of attending the meeting.

RESIDENT BASELINE ASSESSMENT

PURPOSE

A resident baseline assessment process is utilized to provide a subjective and objective evaluation of the baseline clinical skills for oncology residents. This process helps identify areas that the residents need to further develop or focus on throughout the year and serve as a reference for the preceptors and program director to use in their evaluations. An initial skills list is used by the residents as a guide for future experiential training.

The overall goal is to achieve consistency and proficiency in the basic skills among the residents given their various training backgrounds, to identify and provide feedback on areas for improvement, and ultimately to build an individualized, structured residency plan.

ASSESSMENT TOOL

The goal-based residency evaluation is provided to the residents during their orientation period to provide objective feedback on their current skill level and identify areas that need development.

These specific objectives are included in the residency plan and should be emphasized early in the residency year.

CRASH COURSE

A set of crash courses is given the last two weeks of the orientation month. Material, journal articles, or guidelines are distributed to the residents prior to the scheduled sessions. The purpose of these sessions is to provide a consistent knowledge base for the starting residents so that the preceptors may focus on higher-level learning during clinical rotations.

FOLLOW-UP

The information attained through the initial assessment is assessed throughout the residency year, and the progress of the residents is followed closely by the program director, who act as an intermediary between residents and preceptors. Residents should expect the areas identified as needing improvement to be reevaluated as they progress from one rotation to the next. Ideally, by the end of the year, the residents gain the knowledge and experience required in order to achieve the goals of the residency.

ORIENTATION MONTH

Orientation starts in July. During orientation, the residents receive:

- a. hospital orientation (two days)
- b. pharmacy computer base training (one to two weeks)
- c. chemotherapy admixture in different chemotherapy practice areas throughout the hospital
 - i. Inpatient:
 1. clean room (adult resident)
 2. M9 (one week, pediatric resident)
 - ii. outpatient:
 1. PACC (one week)
- d. crash courses to ensure that residents have the same baseline prior to the start of clinical rotations. Crash courses given in the last two weeks of orientation include but are not limited to:
 - i. VTE prophylaxis
 - ii. febrile/neutropenia
 - iii. pharmacokinetics
 - iv. American Society of Clinical Oncology (ASCO) guidelines on oncologic emergencies
 - v. ASCO guidelines on chemo-protectants
 - vi. ASCO guidelines on ESAs and CSFs
 - vii. NCCN/MASCC/ASCO guidelines on CINV
 - viii. overview of statistics
- e. a plan of development for each resident prior to the first rotation

RESIDENT PLAN OF DEVELOPMENT

Consistent with the ASHP residency standard, each resident completing the residency training program at Memorial Sloan Kettering shall prepare an individual plan for development. The residents assume primary responsibility to develop the plan and document their respective goals, interests, strengths, and planned modification of the set rotations and activities.

The residency program director mentors and assists residents in the decision-making process. Within the framework of the ASHP residency standard and the administrative guidelines of the residency program, the residents are encouraged to assume ownership of their training experience and development plan.

To develop the plan, the residents should answer the following questions in a narrative form:

Career Goals

1. State your career goals, both short (five years) and long term (ten to 15 years).
2. Describe your current practice interests (inpatient oncology/ outpatient oncology).
3. Identify your strengths, including clinical and personal.
4. List areas of weakness that you would like to improve during the residency year.
5. Describe activities, projects, and experiences that have contributed to your skills in the following areas:
 - a. verbal communication skills and public speaking
 - b. time management
 - c. supervisory skills
6. What area of residency training you would like to concentrate on during the program in order of importance:
 - a. hematologic malignancies
 - b. bone marrow transplant
 - c. drug information and drug use policy
 - d. medical oncology
 - e. other
7. Identify three goals you wish to accomplish during the residency.

8. Briefly describe your life's plan. What are the areas that are most important to you?

- a. individual plan to be completed by RPD
- b. background
- c. interests
- d. goals
- e. recommendations (rotations)

Each resident must follow a standard format in preparing the plan for development. The residents and residency program director finalize and add the plan for development in PharmAcademic.

Residents are required to complete a periodic self-assessment during the residency year. The self-assessment should be completed at the time of the quarterly evaluations. The resident and residency program director review the periodic self-assessment along with the evaluation comments to ensure that the resident achieves the desired goals and objectives during the residency year.

It is important to document all the residents' accomplishments and also mention some of the goals that have been attained. The quarterly resident evaluation should document progress within each resident's plan for development.

EDUCATION REQUIREMENT PROPOSAL

INTRODUCTION

The establishment of a teaching requirement is consistent with ASHP goals, statement, and objectives for oncology residency training. When the oncology residency is completed, it is expected that the resident will have developed competency in teaching and training healthcare professionals and students.

The ideal situation is for every resident to gain a significant amount of experience in all areas of education while at the same time spending a minimal amount of time away from rotation activities. It is important to note that some residents will have more opportunities to gain experiences in different areas than others, dependent on rotation schedule. However, it is expected that all residents will complete the residency and the core objectives for teaching experiences.

The system proposed ensures a well-rounded educational experience for the residents while maximizing time on rotation. The system is designed to coincide with rotation activities. There are various categories from which to select to provide residents with some choices in educational activities.

PLAN

Each resident is responsible for achieving a sufficient amount of educational experience throughout the year. The system is intended to ensure that each resident master the minimum requirements for educational experience.

During the residency program the resident has the opportunity to complete the following educational activities. Please refer to program requirements to determine which of the following educational activities are required for successful program completion.

1. teaching oncology didactic lectures (at least eight per year)
2. a formal ACPE continuing education lecture during Pharmacy Grand Rounds (one per year)
3. journal club (at least four per year)
4. case, didactic, and clinical debate presentations (up to nine per year)
5. educational in-services for nursing (four per year)
6. precept one pharmacy student for a month rotation (one per year as the opportunity arises)
7. department newsletter (InPHARMatation) (12 per year)

EXPECTATIONS FOR EDUCATIONAL OPPORTUNITIES

1. Oncology Didactic Lectures

These are biweekly lectures dedicated to enhance residents' oncology knowledge. The topics are scheduled by the oncology program directors. Residents alternate in preparing lectures. Each resident has a window of four weeks to prepare for the lecture. The format of these lectures is flexible and it is up to the residents to deliver them in any style desired. A total of eight lectures per resident are scheduled throughout the year.

2. ACPE continuing education presentation

The Pharmacy Department gives a monthly continuing education program to healthcare professionals. The residents are responsible for presenting one lecture per year. This allows the residents to practice their presentation skills in discussing a comprehensive and advanced topic. The residents are expected to preparation and master the area in which the presentation is given.

3. Journal Clubs

Journal clubs are scheduled to be given once every two weeks. The journal clubs are designed to give the resident experience in critiquing a medical journal article. The resident will evaluate the article beforehand and lead the group in discussion of the article, soliciting opinions from all attendees. The residents have the opportunity to prepare for four different journal clubs.

4. Clinical Presentations

The clinical presentations are weekly presentations prepared and presented by the oncology residents as assigned. There will be appropriately 4 to 6 sessions per month with each resident completing at least 6 presentations throughout the academic year.

The clinical presentation format may vary from an interactive case based format, to more didactic in nature, or may consist of novel active learning approaches such as therapeutic debates. During the case based format the resident should cover the disease state and what are the possible interventions necessary to improve this specific patient outcome. Didactic lectures will cover a specific disease state and require residents to discuss clinical trials and current standards of care. While clinical debates will allow residents to pair up and engage in an evaluation of a specific treatment option and explore the supportive evidence and specific critiques of the emerging treatment modality.

5. In-services

An in-service is defined as a presentation of at least 15 minutes in length, with at least three people in attendance.

The residents give in-services on various rotations. These in-services are scheduled by the preceptor and the nurse manager of that specific floor.

6. Co-precepting Students

The structure of this educational requirement is largely left up to the preceptor and student. To achieve this goal, the oncology resident should be comfortable leading an hour-long discussion with a student under the preceptor's oversight at least four times in a rotation month. Oncology residents are expected to take a larger leadership role in precepting students. Also, residents may assist the student on rounds, following up with patients, drug information questions, or other daily activities in a rotation month. The residents should participate in this when they are well into the residency year, or are in an area in which they have adequate clinical experience to serve as the preceptor for the student.

7. Department Newsletter

The monthly newsletter provides an opportunity for residents to develop medical writing skills to effectively communicate clinical updates to a varied audience in a clear and concise way. The residents are required to write original clinical content for the newsletter at least once throughout the year but additional articles are encouraged.

8. Academic Lectures at College of Pharmacy (Optional)

MSK has a formal teaching relationship with Rutgers School of Pharmacy. If the resident wishes to participate in didactic lectures, evaluations, or exam writing, opportunities will be coordinated.

COMMUNICATION SKILLS

Effective communication skills are critical for the pharmacy practitioner. While the residents will have numerous opportunities to refine their skills on rotation, the following experiences can build their skills with:

1. direct involvement in patient admission medication reconciliation and discharge counseling regarding home medication regimen during selected clinical rotations within the hospital; and
2. patient counseling in the longitudinal clinics involving hands-on experience, discussing the patient's disease and drug therapy, monitoring and adjusting drug therapy regimens, and methods to enhance adherence.

WRITTEN SKILLS

Pharmacy Newsletter (InPHARMatIon)

The oncology residents write a monthly newsletter distributed to all pharmacy employees. This newsletter contains relevant professional information and also serves as the department's public relations and information platform.

Procedure

1. The official title of the newsletter is "InPHARMatIon."
2. The newsletter is distributed on the first day of every month.
3. The writers are the oncology residents, who are responsible for each monthly issue.
4. The pharmacy director is the chief editor and has oversight responsibility.
5. The editors consist of the current oncology residency program directors, the current residents and a computer software editor who assists with newsletter design.

Format

1. The length of the newsletter shall not exceed four pages.
2. Web-based software is used to publish the newsletter.
3. The newsletter is distributed electronically as a PDF document emailed to the entire pharmacy staff.

Content

Articles featuring current issues and activities related to pharmacy practice obtained from the pharmacy staff can include the following:

- operational issues
- new policies or procedures
- pharmacy and therapeutics committee updates
- clinical services updates
- medication-safety-related Items
- pipeline drug and investigational drug service updates
- drug shortages
- ASHP updates/HOPA updates
- announcements
- public relations
- personal achievements (career, presentations, publications)
- personnel changes

Newsletter Submissions

1. All information should be submitted in electronic format.
2. Articles should be submitted directly to the residents.
3. The submission of personal information for publication is purely voluntary.
4. It is up to the resident to choose the relevant articles out of those submitted.

Preparation

The following timetable will be utilized to support timely publication and distribution:

1. Second week of the month: Call for submissions
2. Third week of the month: Submissions are due to the residents
3. Fourth week of the month: a. First draft
b. Revision by the editors
c. Revision by the director of pharmacy
4. First day of the month: InPHARMatation is distributed to all pharmacy staff

Distribution

1. All MSK pharmacy personnel must receive an electronic copy of the newsletter.
2. The newsletter must be posted on the pharmacy page on OneMSK.

Pharmacy Newsletter Checklist

Title	InPHARMation
Contact Persons	Chief editor: Scott Freeswick Editors: Larry Buie Sherry Mathew Designer: Jannie Zheng Residents: Class of 2017-2018
Operations Issues	
New Policies and Procedures	
Clinical Service	
P&T/Drug Information/Pipeline Drugs	
Medication-Safety-Related Items	
IDS	
Drug Shortages	
ASHP/HOPA/ASCO/ASH	
Public Relations	
Career Development/ Accomplishments	
Announcements	

RESEARCH PROJECTS

BACKGROUND

The Department of Pharmacy at MSK strives to be a leader in research. Depending on the expertise and opportunities at MSK, the oncology residency program includes a research component that is often referred to as the oncology resident research project. The research project is designed to teach the residents about the scientific method and facilitate their application of knowledge to a research project. Each resident will learn about research methods and be required to complete one major project relating to oncology pharmacy.

The residency program provides an opportunity for doctors, preceptors, and residents to collaborate on ideas. A structure is in place to facilitate the interaction between residents and preceptors for the yearlong research experience.

RESEARCH PROCESS

The application of the knowledge gained in the educational sessions will occur through the completion of a research project. The research project will be completed within the residency year. Both the resident and project adviser are responsible for completion of the project.

Application of proper research methods requires knowledge. The resident will have the proper guidance from the program director throughout the year.

- **Research methods:** Understand the issues involved in choosing a research design. Describe the relative advantages and disadvantages between having a pretest, having a control group, and randomization. Describe the threats to internal and external validity for each research design.
- **Statistics:** Demonstrate an understanding of the different levels of measurement. Describe the different statistical techniques used based on the level of measure. Describe the basic statistical tests (students, t-test, ANOVA, chi-square).

PROJECT IDEA GENERATION

Ideas for projects will be provided to the residents at the beginning of the residency year. In the event the resident would like to develop their own idea, the following must be described in full:

1. Name of project in one sentence
2. Background: Why is it important?
3. Is the project doable within a residency year?
4. Who would be the project adviser?
5. Who else would be recommended for the committee?
6. What resources are needed to complete the project?
7. What are the primary outcomes, cost reductions, patient safety issues, other issues?
8. What is the impact of the project for the department?
For the organization?
9. How will the project help you with daily patient care?
10. What will you do with the results? Publish them?
Present them?
11. Are there any individuals or departments who need to approve the project?

PROJECT IDEA APPROVAL

Ideas are reviewed and approved by the residency director and the pharmacy director. They are then submitted to the preceptor committee for completion of the goals and objectives for each resident.

PROJECT IDEA SELECTION

The residents are given plenty of ideas to choose from. However, the residents should pick a topic relevant to a particular interest.

The residents should meet with each research project mentor prior to project selection. Projects may proceed after final approval from the RPD. IRB approval should be sought early in the year so that projects are approved by October.

RESEARCH PROPOSAL

The resident and program director are responsible for developing a formal research proposal. The research proposal should have the following sections:

- 1. Research question:** A well-defined research question will allow the residents to focus on the correct research design and plan. What exactly are you trying to answer?
- 2. Objectives:** Be as specific as possible. The objectives should be quantifiable. You can have a primary objective and multiple secondary objectives for each research question.
- 3. Research hypotheses** (if applicable): What relationships do you expect to see?
- 4. Background:** Perform a literature review of the research question. Summarize the literature. What has been done? What impact has been shown?
- 5. Methods:** How are you going to answer your research question? What is your study design? What measures are you going to need?
- 6. Data analysis:** How are you going to analyze the results?

RESEARCH RESULTS PRESENTATION

The results of the research project will be presented as a poster presentation at the HOPA annual meeting. The residents will also give a platform presentation of their research project to MSK staff. All members of the department will be invited.

The resident will submit a written manuscript, suitable for publication, to the program director and director of pharmacy.

The resident, in conjunction with the program director, may elect to submit the project to a journal or for presentation at a different local, state, or national conference.

RESPONSIBILITIES

While the project may be the resident's, it is important to be aware of intellectual capital. Thus, the program director should be closely involved in the research. Others working on the research project may be more or less involved, depending on their areas of expertise required in the project. There are several individuals who will be responsible for successful completion of a research project.

The residents are responsible for investing their time and problem solving skills into the research. The residents should keep their

program director appraised of progress. The residents are responsible for carrying on the research in a scholarly manner.

RESIDENCY RESEARCH PROJECT CHECKLIST

August

- Select project data.
- Select project committee members. In addition to the program director, the committee may consist of at least one additional preceptor.
- Present project idea to the preceptor. A short written description should include background information, objectives, possible methodology, and potential obstacles.
- Submit IRB waiver to the Pharmacy Research Council (PRC) for approval
- PRC chair submits waiver to IRB

September to October

- Obtain IRB approval
- Develop data collection sheet

December

- Obtain the data points

January

- Submit an abstract to HOPA depending on the published deadline.

March

- Present research abstract at the HOPA meeting through a poster presentation

May

- Develop platform presentation highlighting key components of research project
- Present platform presentation to the clinical division and Pharmacy Department

June

- Written report submitted to the program director and pharmacy director. The report must be in manuscript style.
- The program director and resident must discuss additional publication or presentation opportunities.

ONCOLOGY RESIDENT RESEARCH PROJECT

IDEA SUBMISSION FORM

- Research project
- Performance improvement and safety
- DUE

Resident: _____

Project name: _____

Background (why is this important?) _____

Is reasonable to expect the project will be completed within the residency year? _____

Who will be the project adviser? _____

Who else would be recommended for the committee? _____

What resources are needed to complete the project? _____

What are the primary outcomes? Savings? Patient safety?
Something else? _____

What is the impact of the project for the department?

How will the project help with daily patient care? _____

What will you do with the results? Publish? Present? _____

Are there any individuals or departments who need to approve
the project? _____

PHARMACY RESIDENT MEDICATION SAFETY PROJECT

Background

A highly visible 1999 report from the Institute of Medicine (IOM) reported that medication errors cause 42,000 to 98,000 deaths in the United States each year. Following this, some critics claimed the estimate overstated the problem while others claimed that the estimate was only the tip of the iceberg, citing the fact that errors in the outpatient sector were not considered in the calculation. Everyone, however, agreed that medication-use systems are in need of improvement.

The Pharmacy Department at MSK supports the therapeutic needs of an average of 470 inpatients per day. The pharmacy reviews 1.5 million orders per year and dispenses more than 3.5 million doses per year. Given the large number of medications used at MSK, even a small error rate (e.g., 1 percent) results in many mistakes each day.

The decentralized structure of Memorial Hospital, together with its high medication-use volume and critical patient population, provides an excellent environment for residents to contribute to the safety of our patients. Each resident works on a formal assessment of a medication error or RISQ event that is designed to improve the safety of the medication-use process and completes a presentation describing the project by the end of the year.

Didactic Training

All of the didactic training provided during the medication safety longitudinal experience will have relevance for this safety project.

- IOM report: Read and discuss selected portions of IOM reports on medical errors.
- Medication error reporting at Memorial Hospital: Discuss the process used to identify, analyze, and respond to medication errors at MSK.

Medication Safety Event Assessment

The associate director of patient safety and the residency program director routinely review the MSK RISQ system for medication errors that are appropriate for a formal review or assessment by a resident. Residents are expected to conduct a formal review of at least one medication event during the year and these assessments are assigned at the discretion of the program director.

Medication Event Assessment Committee

The associate director for patient safety is the adviser to this project. However, the resident may choose a preceptor to be added to the committee. Additional members of the committee include pharmacy leadership and operations pharmacists, depending on the nature of the event. The residents act as the leaders of this committee with the goal of leading the formal event review, highlighting key areas of risk, and facilitating discussion around process and system enhancements to prevent future errors.

Medication Safety Event Assessment Presentation

The results of the safety project will be placed into a Power Point format and presented to pharmacy staff and others who have an interest in this area.

Responsibilities

It is the responsibility of the resident to serve as the primary investigator, to draft safety project documents and to ensure that the project is completed in a timely fashion. It is the joint responsibility of the resident and the adviser to work closely together in all aspects of the project.

RESPONSIBILITIES OF THE ONCOLOGY RESIDENT

TO MSK

Every hospital has its own policies, rules and regulations. You, as an oncology resident, being an employee of the hospital, are expected to familiarize yourself and abide by them. You should also respect the hospital's property by carefully using equipment and furniture.

The hospital expects you, a graduate pharmacist, to practice within the legal framework of your profession. You must strictly adhere to all federal, state and local laws. The hospital may assume liability for a breach of any pharmacy standard, law or regulation.

You should show your sincere loyalty to the hospital. This can be done by supporting its policies, rules and regulations, both inside and outside of the building. Criticizing the hospital is being disloyal. Any criticizing should be done privately, with the program director or pharmacy director.

TO THE PHARMACY PROFESSION

Try to promote oncology residency after completing your residency. Recruit capable pharmacy students to hospital pharmacy. Keep abreast of new trends in hospital pharmacy practice, don't forget drugs. As a pharmacist, you are responsible for keeping current with trends in drug therapy. Providing drug information daily means that you must know about new drug information or where you can obtain it. Being aware of drugs removed from the market is just as important.

You are professional practitioners. Maintain the highest standards of daily prescription practice. You owe the patients to dispense and compound with the highest degree of accuracy attainable. Please abide by the hospital dress code at all times. No flip-flops, jeans, shorts or low-cut pants, even on weekends.

It is your professional responsibility to observe both moral and ethical codes. You should show that your conduct is above reproach and has met the qualities of a good pharmacist. You have the moral obligation to see that other pharmacists do not practice under the influence of alcohol, narcotics, or other stimulants and depressants.

Earn respect through your daily interactions with people by the way you conduct yourself as a professional.

You should be loyal to your colleagues. If a question is raised doubting the integrity of a fellow pharmacist, give him or her the benefit of the doubt. To openly criticize another pharmacist without his or her being able to defend him- or herself is unjust.

TO THE PHARMACY DEPARTMENT

You should be well-rounded and help other people in the pharmacy. It is possible for an individual to be a good pharmacist but have poor interpersonal communication. One must think less of oneself and be interested in the feelings of other people. Sometimes the staff does not always fully understand the reasons why a change has been made such as in a new procedure. Due to your involvement in some research projects, you are in an ideal position to explain things in a more detailed manner.

All the pharmacists on the staff have been practicing pharmacy much longer than the residents. They have gathered a wealth of knowledge and experience during the years. They must be respected for this. A college of pharmacy is limited to what it can teach. Therefore, there is much to be learned after graduation. You may think you know more than many of the pharmacists, but a know-it-all attitude will not gain you anything. Age and experience count for something. It is probably that individual of the older generation who can offer profitable suggestions and advice, which you can use to your advantage.

TO YOUR PRECEPTOR

The preceptors should be treated with loyalty and respect. They are responsible for guiding you to reach your goals. They may do things that are not completely understood at the time. Have faith in them until they can explain their ways. **Faith is a powerful attribute.**

Learn to speak and write to your preceptors. If you can learn to communicate and clearly understand them, you enhance your chances of close relationship. Sometimes you discuss things of a private or semiprivate nature. You must hold these in confidence.

If you have a close rapport with your preceptor, you should be ready to accept any criticism, advice, or suggestion that they might offer. This works both ways. You have the responsibility of informing them of any way they might improve themselves or the department. Through this close relationship, the preceptor and you can discuss things that would otherwise serve as a barrier between the two of you.

Your preceptor is a busy and important individual. Their time is **valuable** to the hospital. Respect this time. If you feel you have not been in an area long enough to have fully grasped the subject, you have the responsibility of informing your preceptor of this.

TO YOURSELF

There are some qualities and attitudes for which you must assume responsibility.

1. Attendance and Punctuality

Regular attendance on time should become a habit. If you must turn in a report every three months, do so on the date due without someone reminding you.

2. Personal Appearance

You should look like a resident. Never use extremes in your attire. There should be a certain something about your appearance that encourages confidence in your ability.

3. Integrity of Character

Positions of trust and responsibility can go only to those who are honest. Careful observance of one's word and code of personal honor are necessary to achieve high performance.

4. Desire to Cooperate

We can only have real progress based upon joint teamwork.

5. Diligence and Application

Strive for consistency in purpose, attention to necessary details, and the ability to stick to a job until it is mastered or fulfilled.

6. Improvement and Initiative

If you aren't familiar with a drug, find out about it before you are asked a question.

7. Enthusiasm

Be enthusiastic in every step you take. Enthusiasm is contagious and it can serve to inspire the other pharmacy staff members.

8. Perform Duties Promptly and Cheerfully

Sometime or another you are faced with doing something you don't like to do. If you are assigned something that may not be to your liking, you have a responsibility to do it promptly and cheerfully.

9. Willingness to Work

Belonging to a profession such as pharmacy, you must be ready to serve your patients whenever called upon, day or night.



Memorial Sloan Kettering
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