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# Hospital Overview

## Mission, Vision, and Values

The mission of St. Jude Children's Research Hospital is to advance cures, and means of prevention, for pediatric catastrophic diseases through research and treatment. Consistent with the vision of our founder Danny Thomas, no child is denied treatment based on race, religion, or a family's ability to pay.

Vision: To accelerate progress against catastrophic disease at a global level

Our core values:

1. Always recognize that advancing treatment for children with catastrophic diseases is at the center of everything we do.
2. Do what is right; take ownership of what you do.
3. Work with purpose and urgency—your efforts matter.
4. Embrace the challenge to create a new tomorrow.
5. Work collaboratively and help others to succeed.
6. Always be respectful of your coworkers, our patients and their families, and visitors to our campus.
7. Make the most of St. Jude resources and be mindful of those who provided them.

## Hospital Location

St. Jude is located in the heart of Memphis, Tennessee, a vibrant and friendly city at the historic American crossroads of music, trade, food, and culture. Cost of living and high quality of life are other attractions; in fact, Money magazine listed Memphis as one of the least expensive cities in which to raise a child. St. Jude facilities and salaries are highly competitive, and a generous start-up and benefit packages are included.

[Hospital Map](#)

# Department of Pharmaceutical Sciences Overview

The Department of Pharmaceutical Sciences comprises Pharmaceutical Sciences (with a primary mission of research), and Pharmaceutical Services (with a primary mission of clinical care). Both research and treatment are highly intertwined at St. Jude Children's Research Hospital, and this integration exists within other academic departments at St. Jude that have a dual mission of patient care and research. Many of our departmental faculty and staff members are extensively involved in both research and patient care. Indeed, the synergies and efficiencies of having the research and service components in a single academic department have been hallmarks of St. Jude since it was established in 1962 and facilitates the success of our institution.

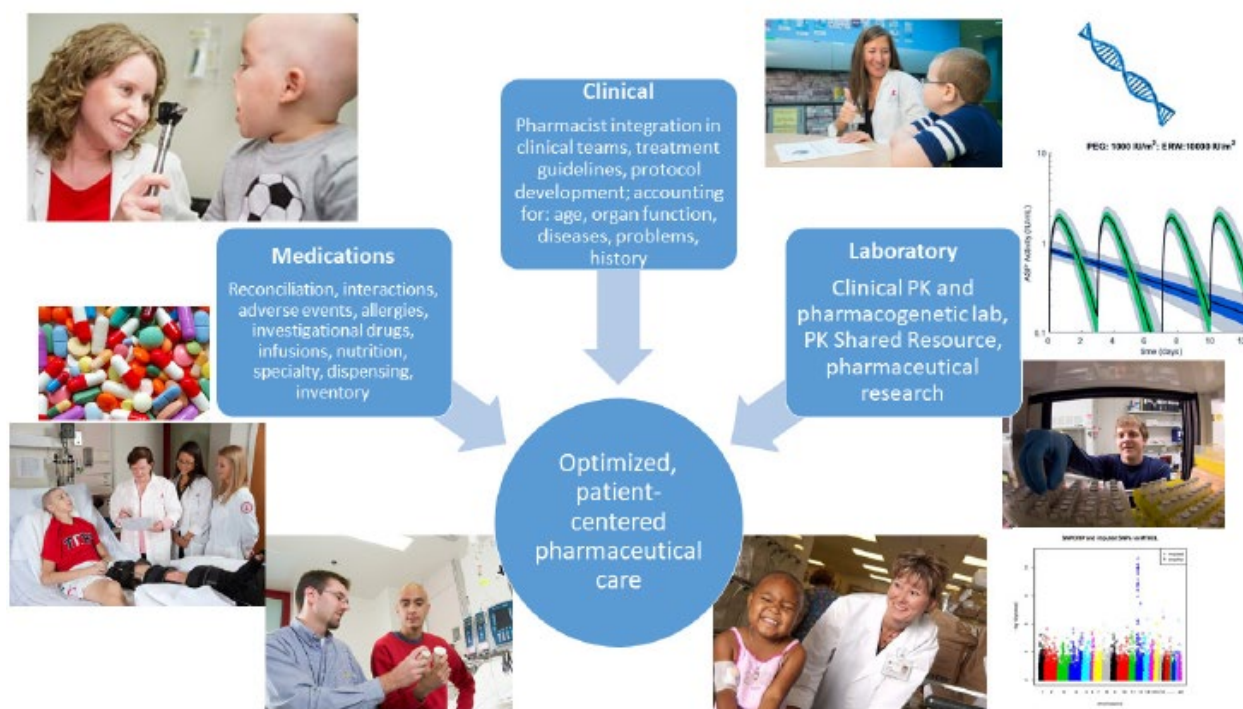


Figure 1. With responsibility for medications, the use of clinical data, and the development of clinical and research laboratory tests, knowledge is used to provide the best possible care for St. Jude patients while also making discoveries with implications outside of St. Jude.

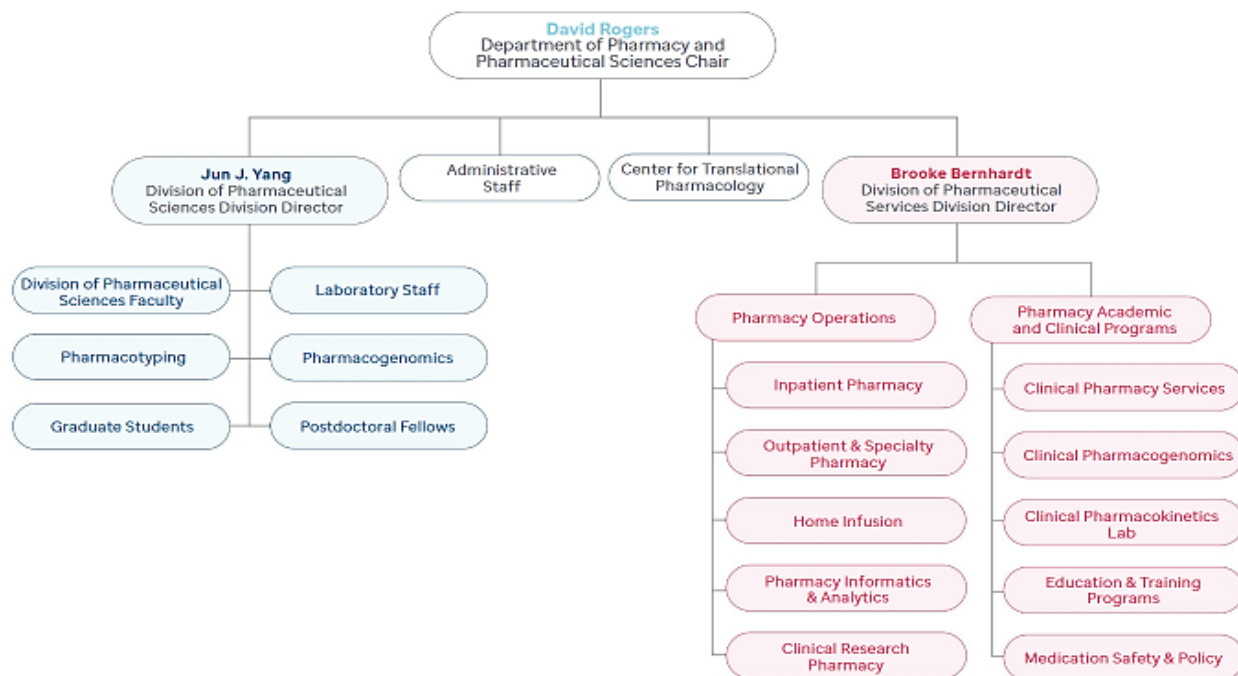


Figure 2. Departmental Reporting Structure

## Pharmaceutical Services Mission, Vision, and Values

**Mission:** Generate new knowledge to advance pharmacotherapy and provide the best patient care for children with catastrophic diseases

Patient Care – Advance pharmacy practice and deliver the best pharmaceutical clinical care for our patients.

Discovery and Implementation – Create new knowledge and rapidly translate it to ensure the safest and most effective pharmacotherapy.

Training and advocacy – Train the next generation of pharmacists and scientists to be leaders, innovators, and advocates for pharmacy practice and pharmaceutical sciences.

**Vision:** Transform pharmacotherapy for patients with catastrophic childhood diseases

## Strategic Goals

1. Translate new knowledge between bench and bedside through collaborations at St. Jude and beyond.
2. Reduce the short-term and long-term toxicity of cancer chemotherapy and treatment of other catastrophic childhood diseases.
3. Advance the understanding of resistance to anti-infective and anticancer chemotherapy.
4. Improve the safety of medication use in the setting of catastrophic childhood diseases.
5. Explore the opportunity to establish a clinical pharmaceuticals program for pediatric formulation and stability to support clinical research and patient care.
6. Deliver unique, innovative, and high-quality pharmaceutical care.
7. Train the next generation of pharmacists and clinical and translational scientists.

## Clinical Pharmacy Services

Clinical Pharmacy Specialists extend the reach of Pharmaceutical Services directly into the patient care team. (see figure below) Specific teams currently addressed by these clinicians include Leukemia/Lymphoma, Solid Tumor/Neuro-Oncology, Bone Marrow Transplant & Cellular Therapy, Intensive Care, (non-malignant) Hematology, and HIV clinic. These board-certified pharmacists are credentialed members of the medical staff and are given collaborative authority to perform direct patient assessment and prescriber medication therapy and associated laboratory tests for patients assigned to their teams. As members of the medical staff, Clinical Pharmacy Specialists provide routine clinical pharmacy services in both the inpatient and outpatient setting and ensure optimal prescribing and monitoring of medication therapy for patients assigned to their team. This includes the use of individualized pharmacokinetics and targeted therapy for antineoplastics and other medications. These individuals also work closely with clinicians to provide oversight and development of care plans (non-protocol treatment plan) for patients who are not managed according to an approved research protocol.

Unique clinical pharmacy programs focus on Antimicrobial Stewardship (2 dedicated FTEs) and Clinical Pharmacogenomics (see page 21 for more detail). St. Jude is recognized as an “Antimicrobial Stewardship Center of Excellence” by the Infectious Diseases Society of America, reflecting the effective integration of this program into clinical care processes and care teams. This effort is an ongoing collaboration between our department and the Department of Infectious Diseases, and routinely engages team-based Clinical Pharmacy Specialists as well as Infectious Diseases Faculty and Fellows impacting clinical care decisions. The outstanding contribution of the individuals who provide Clinical Pharmacy services was further recognized with receipt of the Clinical Care Improvement Award for the institution in 2020. The efforts and impact of Clinical Pharmacy Services reaches globally in the activities and contributions of Dr. Jennifer Pauley, Clinical Pharmacy Coordinator for Global Pediatric Medicine.

## Departmental Policies

A complete list of Pharmaceutical Services Policies and Procedures can be found [HERE](#).

# Residency Program Administration

## Role and responsibility of Residency Program Director

The Resident Program Director is responsible for overseeing all aspects of the individual residency program, which includes but is not limited to the direction, conduct, and requirements of the program. The director ensures that program goals and objectives are met, schedules and preceptorship are structured to facilitate the best learning, and evaluations are performed routinely and based on established learning objectives. These tasks are carried out with the help and assistance of the Director of Pharmacy and Resident Program Coordinator.

## Role and responsibility of Residency Program Coordinator

The Residency Program Coordinator is responsible for supporting the Residency Program Director in overseeing the direction, conduct, and requirements of the program.

## Role and responsibility of Residency Programs Coordinator

The Residency Programs Coordinator is responsible for overseeing aspects of the residency program that pertain to all residents within all programs. The coordinator schedules orientation and yearlong meetings with administration, develops and distributes surveys for feedback at completion of the residency year, and facilitates preceptor development.

## Residency Preceptors and Preceptor Responsibility

Each learning experience has a primary preceptor that develops learning activities and guides the rotation to meet the goals and objectives of the experience, while considering the individual resident's goals, interests, and skills. The preceptor is responsible for reviewing the resident's performance and providing both oral and written feedback to the resident and Resident Program Director.

Other responsibilities of the preceptor include

- Review the learning description with the resident prior to the rotation starting or by the end of the first day of the rotation.
- Orient the resident to the service, unit/clinic, and team members.
- Discuss the responsibilities and activities of the clinical pharmacist on that service or clinic
- Instruct, model, coach, and/or facilitate how to verify orders, review profiles, identify and make interventions.
- Discuss expectations of the resident for the learning experience.
- Complete the rotation evaluation of the resident within 7 days of completion of the rotation.

## Project Mentor and Team

The resident will work with a project mentor and team, who are experts in the area of the selected project. The project team's primary responsibility is to guide the resident in carrying out and completing the required research project. The project team will help the resident in planning and implementing the project to ensure a successful outcome. They will also provide feedback on presentations related to the research project, as well as drafts of the manuscript.

## Resident Mentor

For the Oncology program, residents will have the opportunity to select a preceptor to serve as their mentor throughout the year. Mentors will serve as a resource for the residents. Focused conversations should occur regarding professional and personal goals throughout the residency year. It is encouraged for the resident and mentor to meet monthly, but this is left up to the discretion of the mentor and mentee.

## Residency Directors Committee and the Residency Advisory Committee

The post-graduate year 2 (PGY2) pharmacy residency programs at St. Jude Children's Research Hospital (St. Jude) consists of the Residency Directors Committee (RDC) and the Residency Advisory Committees (RAC).

The Residency Directors Committee has oversight of all the pharmacy residency programs. This committee consists of the Residency Programs Coordinator, all Residency Program Directors, all Residency Program Coordinators, and key leaders from the Department.

The Directors' Committee shall assure the Residency Programs:

- Adhere to ASHP Accreditation Standards
- Adhere to St. Jude and Pharmaceutical Department policies and procedures
- Continuously evaluate all aspects of the program
- Discuss resident recruitment
- Conduct corrective actions and dismissals, as necessary
- Develop and maintain policies and procedures
- Approve changes to Residency Handbook as determined by RAC
- Develop new programs as needed
- Assure provision of adequate resources for proper conduct of residency programs

The Residency Program Directors shall:

- Oversee all aspects of their respective program
- Ensure all competency area, goals, objectives, and requirement of the program are met
- Continuously track resident progress and resolve pertinent issues



The RACs consist of the Residency Program Director, the Residency Program Coordinator, key leaders from the Department, and selected preceptors.

The RACs shall assure the Residency Programs:

- Discuss incoming residents' interests, strengths, and professional/personal goals
- Discuss resident performance of assigned learning experiences
- Establish preceptor responsibilities and preceptor development initiatives,
- Discuss and plan relevant performance improvement efforts
- Discuss overall performance of each resident and identify any areas for improvement
- Assure mentorship is provided to residents
- Review the Residency Handbook annually and recommend changes to the Residency Directors Committee

Preceptors can volunteer to be on the RACs. If there are not enough volunteers, preceptors will be selected by the Residency Directors Committee. A term of appointment will be 2 years, with the option of staying for 2 consecutive terms.

Process for Communication:

- All committee agendas and minutes will be placed on a Teams site accessible to all members of the residency programs
- Longitudinal rotations will be discussed at a minimum quarterly, but may be discussed more frequently based on the rotation (e.g., research projects)
  - This will be accomplished by the longitudinal preceptors reporting at the last month of each quarter (March, June, September, and December) meetings. Longitudinal preceptors may join on an unscheduled month if an issue needs to be addressed at large.

# Program Structure, Policies, and Procedures

## Policy for Residents Passing Tennessee Board of Pharmacy Licensure Exam

### Purpose

In accordance with the ASHP Accreditation Standard for PGY2 residency programs, applicants must be licensed pharmacists. Additionally, applicants must be eligible for licensure in the state in which the residency program is conducted.

Residents who do not successfully complete their PGY1 program will be promptly dismissed from our program.

### Policy

Applicants must be licensed pharmacists in the state of Tennessee or eligible for licensure in the state of Tennessee. Residents are to contact the Tennessee Department of Health/Board of Pharmacy prior to beginning residency to initiate the application process for obtaining a license in the state of Tennessee. The resident must obtain a TN license within sixty (60) days from the start of the residency. If a TN license is not obtained within sixty (60) days, further participation in the program will be subject to review by the Residency Program Director, and may result in either dismissal from the program, or extension of the program to account for the delay.

## Paid Time Off

### Vacation

- Residents are allotted 15 days of vacation on July 1st. For residents that start after the first of July, this amount will be prorated.
- Vacation must be arranged in advance with your Residency Program Director (RPD).
- Vacation time must be taken in increments of 8 hours.
  - No vacation time will be approved during the last 2 weeks of June at the time of the resident's departure from St. Jude, accumulated vacation time may be paid out with the final paycheck.
- Time away from SJCRH for job interviews, board examinations, meetings, and conferences must be taken as annual leave unless other arrangements are approved by the Program Director according to departmental policy. Annual leave is granted at the discretion of the Program Director and must be approved, in Workday, by the Program Director (or designee) in advance. Residents are expected to carry out any duties or assignments as directed by their Program Director on Federal or State holidays unless permission is granted by the Program Director (or designee) according to program policy.

## Sick Leave

- Residents are allotted 9 days of paid sick leave on July 1<sup>st</sup>.
- Hourly (nonexempt) employees must take sick leave and family sick accruals in increments of not less than 15 minutes (0.25).
- Salaried (exempt) employees must take sick and family leave in full-day increments only. Salaried (exempt) employees who report to work for any part of a day will be paid for the full day based on their regularly scheduled hours.
- Sick accruals may be used for reasons related to the employee's personal health, including dental care.
- Employees should not take more sick time than available. If the sick hours are not available for an employee's personal health reason, Workday will deduct the hours from the next available leave balance until all hours are exhausted. In the event an employee's leave balances are reduced to zero, the employee's salary will be reduced to reflect the hours off without pay. An exempt employee will be reduced in whole days only.

## Professional Leave and Travel

Pharmaceutical Services provides opportunities for professional leave and travel that will benefit the institution, department, and individual employees. Employees are encouraged to contribute to the profession by actively participating in professional organizations

Further information can be found in Dept policy 1.13 [Professional Leave and Travel \(stjude.org\)](http://stjude.org)

## Family Leave

- FMLA leave is a guaranteed period of time during which eligible employees can be absent from work with job protection.
- To establish eligibility for FMLA leave, an employee must have worked for St. Jude for at least one year and performed at least 1250 hours of work during the 12 months immediately preceding commencement of the leave.
- Uses of FMLA leave. Eligible employees may request or use up to 12 weeks of unpaid FMLA leave during a rolling 12-month period to cover the time they need to be away from work for any of the following purposes:
  - To care for a newborn child or a newly adopted or newly placed foster care child, as long as the leave is taken within the year of the child's birth or placement. (See Policy: Paid Parental Leave)
  - To care for their child, spouse, or parent who has a serious health condition.
  - To provide employees time off for their own serious health condition that leaves them unable to perform the essential functions of their job.
  - Any qualifying exigency (as defined by applicable law) arising out of the fact that an employee's spouse, son, daughter, or parent is being deployed to a foreign country (if a member in a regular component of the Armed Forces) or is being deployed to a foreign country under a call or order to active duty pursuant to 10 U.S.C. §101(a) (3) (13) (B) (if a

member of a reserve component of the Armed Forces). (See Policy Military Family Leave)

- In addition to the leave described above, an employee who is the spouse, son, daughter, parent, or next of kin of a covered service member (a current member of the Armed Forces, including the National Guard or Reserves, or a veteran who was in the Armed Forces within the past 5 years) shall be entitled to up to 26 weeks of leave during a single 12 month period (not a “rolling” 12 month period) to care for the service member who is undergoing medical treatment, recuperation or therapy, is in outpatient status, or is otherwise on the temporary disability retired list, for a serious injury or illness sustained in the line of duty (See Policy Military Family Leave)
- It is impossible to cover all aspects of FMLA leave in this policy. Therefore, when any employee determines that they will need to take leave under FMLA, they should contact the Human Resources Department – Leave of Absence Office for more information.

## Absences or Extended Leave

- If a resident misses 5 days during a rotation due to sick leave, the rotation will be made up as one of the elective rotations.
- Training will be extended to make up for extended (greater than 37 days) time away from the program. The (up to) 60-day extension will be equivalent in competencies and duration to time missed.
- More information can be found in St. Jude Intuition Policies & Procedures, Reference 1458.

## Duty Hours and Moonlighting

### Policy on Accreditation Council for Graduate Medical Education Duty Hours

#### Purpose

Per ASHP Accreditation Standard for PGY2 residency programs, this policy will ensure that St. Jude complies with the current duty hour standards of the Accreditation Council for Graduate Medical Education (ACGME). The RPD will ensure that neither the educational outcomes of the program nor the welfare of the resident or the welfare of patients are compromised by excessive reliance on residents to fulfill service obligations.

#### Definitions:

**Duty Hours:** Duty hours are defined as all scheduled clinical and academic activities related to the pharmacy residency program. This includes inpatient and outpatient care; in-house call; administrative duties; and scheduled and assigned activities, such as conferences, committee meetings, and health fairs that are required to meet the goals and objectives of the residency program. Duty hours must be addressed by a well-documented, structured process.

Duty hours do not include reading, studying, and academic preparation time for presentations and journal clubs; travel time to and from conferences; and hours that are not scheduled by the residency program director or a preceptor.

**Scheduled duty periods:** Assigned duties, regardless of setting, that are required to meet the educational goals and objectives of the residency program. These duty periods are usually assigned by the residency program director or preceptor and may encompass hours which may be within the normal work day, beyond the normal work day, or a combination of both.

**Moonlighting:** Voluntary, compensated, pharmacy-related work performed outside the organization (external), or within the organization where the resident is in training (internal), or at any of its related participating sites. These are compensated hours beyond the resident's salary and are not part of the scheduled duty periods of the residency program.

**Continuous Duty:** Assigned duty periods without breaks for strategic napping or resting to reduce fatigue or sleep deprivation.

**Strategic napping:** Short sleep periods, taken as a component of fatigue management, which can mitigate the adverse effects of sleep loss.

## **DUTY-HOUR REQUIREMENTS**

Residents, program directors, and preceptors have the professional responsibility to ensure they are fit to provide services that promote patient safety. The RPD must ensure that there is not excessive reliance on residents to fulfill service obligations that do not contribute to the educational value of the residency program or that may compromise their fitness for duty and endanger patient safety. Providing residents with a sound training program must be planned, scheduled and balanced with concerns for patients' safety and residents' well-being. Therefore, programs must comply with the following duty-hour requirements:

### **I. Personal and Professional Responsibility for Patient Safety**

- A. Residency program directors must educate residents and preceptors about their professional responsibilities to be appropriately rested and fit for duty to provide services required by patients.
- B. Residency program directors must educate residents and preceptors to recognize signs of fatigue and sleep deprivation and adopt processes to manage negative effects of fatigue and sleep deprivation to ensure safe patient care and successful learning.
- C. Residents and preceptors must accept personal and professional responsibility for patient care that supersedes self-interest. At times, it may be in the best interest of patients to transition care to another qualified, rested provider.
- D. If the program implements any type of on-call program, there must be a written description that includes:
  1. The level of supervision a resident will be provided based on the level of training and competency of the resident and the learning experiences expected during the on-call period; and,
  2. Identification of a backup system if the resident needs assistance to complete the responsibilities required of the on-call program.
- E. The residency program director must ensure that residents participate in structured handoff processes when they complete their duty hours to facilitate information exchange to maintain continuity-of-care and patient safety.

## **II. Maximum Hours of Work per Week and Duty-Free Times**

- A. Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities and all moonlighting.
- B. Moonlighting (internal or external) must not interfere with the ability of the resident to achieve the educational goals and objectives of the residency program.
  - 1. All moonlighting hours must be counted towards the 80-hour maximum weekly hour limit.
  - 2. Programs that allow moonlighting must have a documented structured process to monitor moonlighting that includes at a minimum:
    - i. The type and number of moonlighting hours allowed by the program.
    - ii. A reporting mechanism for residents to inform the residency program directors of their moonlighting hours.
    - iii. A mechanism for evaluating residents' overall performance or residents' judgment while on scheduled duty periods and affecting their ability to achieve the educational goals and objectives of their residency program and provide safe patient care.
    - iv. A plan for what to do if residents' participation in moonlighting affects their judgment while on scheduled duty hours. Mandatory time free of duty: residents must have a minimum of one day in seven days free of duty (when averaged over four weeks). At-home calls cannot be assigned on these free days.
- C. Residents should have 10 hours free of duty between scheduled duty and must have at a minimum 8 hours between scheduled duty periods.
- D. If a program has a 24-hour in-house call program, residents must have at least 14 hours free of duty after the 24 hours of in-house duty.

## **III. Maximum Duty-Period Length**

- A. Continuous duty periods of residents should not exceed 16 hours. The maximum allowable duty assignment must not exceed 24 hours even with built in strategic napping or other strategies to reduce fatigue and sleep deprivation, with an additional period of up to two hours permitted for transitions of care or educational activities.
- B. At-Home or other Call Programs
  - 1. At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident.
  - 2. Program directors must have a method for evaluating the impact on residents of the at-home or other call program to ensure there is not a negative effect on patient care or residents' learning due to sleep deprivation or serious fatigue.
  - 3. Program directors must define the level of supervision provided to residents during at-home or other calls.
  - 4. At-home or other call hours are not included in the 80 hours a week duty-hour calculation, unless the resident is called into the hospital/organization.
  - 5. If a resident is called into the hospital/organization from at-home or other call program, the time spent in the hospital/organization by the resident must count towards the 80-hour maximum weekly hour limit.
  - 6. The frequency of at-home call must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks. No at-home call can occur on the day free of duty.

## Staffing

All residents will be introduced to the department during July. Each program has its own staffing requirements.

### Oncology residents

During the residency year, residents will be trained in operational processes within the department, including sterile products and chemotherapy preparation. Clinical coverage of weekends will be approximately every fourth weekend.

### Clinical Pharmacogenomic residents

Clinical coverage of weekends will be approximately every fourth weekend.

### Infectious Diseases Pharmacy residents

Residents may be expected to provide up to 16 hours per month of weekend staffing coverage for clinical services including ID/AMS.

### Medication-Use Safety and Policy residents

Residents will be expected to provide up to 16 hours per month of staffing coverage in the Central Pharmacy.

### Pharmacy Informatics residents

Residents will be expected to provide up to 16 hours per month of staffing coverage in the Central Pharmacy. Residents will also be on-call for approximately one week each month during the second half of the year for technical Pharmaceutical Services Informatics support.

## Holiday Coverage

The residents in the Oncology and Clinical Pharmacogenomic programs will be expected to cover two of the nine days that St. Jude recognizes as paid holidays. The specific holidays will be determined by the end of July based on resident preferences and in consultation with the program directors.

## Professional Development Allowance

St. Jude is committed to promoting the professional development activities of its employees. In support of these activities, an annual professional development allowance (PDA) may be provided.

More information can be found in [Institutional Policy 10.06.009](#).

# Resident Development Plan

Consistent with the ASHP residency standard, each resident completing the residency training program will prepare an individual plan for development. The Resident Development Plan is a personalized plan developed at the beginning of the residency year by the resident and program director. It should reflect the resident's interests, goals, strengths, and an actionable plan associated with each. This will serve as a tool to help monitor, track, and communicate the resident's overall progress and adjustments made to meet learning needs.

The residency program director assists residents in the decision-making process and development of the plan. The plan should be updated at least quarterly and documented in PharmAcademic.

## Remediation

### Residency Disciplinary/Dismissal Policy

This corrective action process (CAP) will be utilized if the resident fails to meet obligations and responsibilities outlined in the educational goals and objectives of the residency. This includes, but is not limited to, satisfactory progress toward attainment of all residency program goals and adherence to all, institutional departmental and residency policies. All aspects of this policy will be handled in a manner consistent with existing St. Jude policies.

- A. The Residency Program Director (RPD), prior to initiating a CAP, will conduct a thorough investigation, to include meeting with the resident to investigate the concern and offer the resident an opportunity to provide information relevant to the identified problem.
  - a. If the issue is with the RPD, either as RPD or as a preceptor, then the immediate supervisor or the Chief Pharmaceutical Officer will be contacted to investigate on behalf of the resident, to include meeting with the individual resident to discuss the concern and offer the resident an opportunity to provide relevant information in regards to the identified problem.
- B. If the investigation leads the RPD to believe that a CAP may be necessary, the Chief Pharmaceutical Officer (or designee) and Director for Labor & Employee Relations (or designee) should be contacted and informed of the situation.
- C. Following an investigation, as outlined above, the RPD in association with Residency Advisory Committee (RAC) will review the results of the investigations to determine the need to initiate a CAP and if so, determine a timeline for the action. The RPD will inform the involved resident(s) of the results of the review regardless of the final decision. The CAP will be approved by simple majority vote of the RAC.
- D. The CAP consists of the following:
  - a. A verbal or written counseling (generated by the RPD) including specific expectations for improved performance or behavior. Such counseling will be conducted in the presence of the Chief Pharmaceutical Officer or designee.
  - b. Notification of the duration of the probationary period associated with the CAP.
  - c. Definition of a schedule for any additional verbal or written review deemed necessary during the probationary period associated with the CAP, if needed



- d. A verbal and written statement issued by the RPD in consultation with the RAC at the end of the probationary period stating the final evaluation of the resident's performance therein. Discussion of this statement and its development will be documented in minutes of meetings of the RAC. The final evaluation shall fall into one of three categories:
  - i. Successful improvement and achievement of required program performance and/or professional behavior by the resident.
  - ii. Partial improvement with unsuccessful achievement of the required performance or behavioral expectations. If this applies to an inability of the resident to successfully complete the residency training this will be accompanied by a request for voluntary termination written by the RPD.
  - iii. Continued demonstration of the performance or behavior requiring corrective action without improvement. This is to be accompanied by issuance of an involuntary termination letter written by the RPD.
- e. When the RPD in conjunction with the RAC determines that a CAP is completed, the RPD will write a letter or memo to the resident, and minutes of CAP meeting will document completion of this CAP. All documents regarding the CAP will be kept in the resident's file, and a copy of each document must be given to the resident.

### **Grounds for Immediate Dismissal from the Program**

Just cause for dismissal includes persistent failure to perform the normal and customary duties of a pharmacy resident, and/or substantial or repetitive conduct considered unprofessional or ethically unacceptable or which is disruptive of the normal and orderly function of the institution. Specific concerns, behaviors, or actions potentially fulfilling these requirements are listed below (this list is not all inclusive).

- A. The resident knowingly or due to reckless behavior places a patient, employee, or any other person in danger.
- B. The resident acts violently or threatens violence toward any other person including aggressive behavior or stalking.
- C. The resident is found to be using alcohol, illegal substances, or other recreational substance at any time during work and non-works hours with which use of these substances interferes with their ability to perform work duties in a professional, responsible, and safe fashion.
- D. The resident is found to carry, possess, or use any weapon on the institution's property (see Policy #15.20.120 (Weapons Policy)).
- E. The resident falsifies information on a document.
- F. The resident commits plagiarism as determined by a majority decision of an ad-hoc committee called to review materials suspected of plagiarism. This committee must consist of the RPD, Chief Pharmaceutical Officer, and others as deemed appropriate by the RAC.
- G. Excessive absences from the program per H.R. 15.20.005 and an unwillingness to make up this time on a voluntary basis.
- H. The resident sexually harasses a member, employee, or any other person while in performance of their duties as a resident.
- I. The resident commits an act of vandalism or theft of the institution's property.

Following an investigation, the RPD in conjunction with the RAC, will review the results of the investigation to determine one of the following recommendations by a vote:

- A. Need for immediate dismissal
- B. Need for immediate CAP – involuntary dismissal may result. The CAP shall meet all the requirements outlined above. In addition, the RPD will inform such licensing or regulatory bodies as necessary regarding the details of the event(s). The RPD shall inform the resident of the results of the review.

### **Responsibilities**

It is the responsibility of the resident to complete all assigned residency activities that were outlined in the acceptance letter as requirements to receive a residency certificate. Furthermore, it is the responsibility of the resident to comply with all institutional policies and procedures as well as conduct oneself in an ethical and professional manner. It is the responsibility of the RPD and preceptors to monitor each resident's progress, note deficiencies, and provide structure and activities to promote growth and success. It is also the RPD and preceptors' responsibility to provide constructive criticism to the resident and develop a customized action plan with the resident to improve performance as necessary. Finally, it is the RPD's responsibility to award a residency certificate to residents that have successfully completed the above requirements. If a corrective action plan or dismissal from the program is warranted, it is the responsibility of the RPD, preceptors, and Chief Pharmaceutical Officer to follow the institution's policies in all aspects of discipline or dismissal.

NOTE: Please cross-reference HR policies:

- 15.20.005 (Attendance and Tardiness)
- 15.20.015 (Discipline)
- 15.20.010 (Professional Conduct On and Off Campus)
- 15.20.120 (Weapons Policy)
- 15.10.025 (Conditions of Employment)
- 15.10.095 (Separation of Employment and Retirement)

## **Employee Separation**

Upon separation or completion of the program, it is the resident's responsibility to do the following:

- A. Complete the employee separation checklist
- B. Schedule an exit interview or complete the exit interview online
- C. Turn in the Employee Separation Checklist, ID badge, parking hangtag to Human Resources on the last day of employment

Additional information can be found in [Institutional Policy 15.10.095](#)

## Methods for Evaluating Residents

Residents will be formally evaluated via the PharmAcademic system. There are four types of required assessments that evaluate the residents progress and program effectiveness. Residents will be evaluated by the residency program director and each rotation preceptor. There are four separate evaluation types:

- **Resident Development plan and quarterly evaluation:** Performed by the residency program director and resident each quarter. See below for additional information.
- **Summative evaluations:** Performed by preceptor and resident at the end of each rotation
- **Preceptor evaluation:** Performed by resident at the end of each rotation
- **Self-evaluations:** Performed by resident at the end of each rotation

Resident Evaluation Definitions have been developed and approved by the Residency Advisory Committee. Each rating should have accurate and objective comments documented within the evaluation that provide an explanation for the chosen rating.

NI = Needs Improvement	<p>The resident's level of skill on the goal does not meet the preceptor's standards of either "Achieved" or "Satisfactory Progress". This means the resident could not:</p> <ul style="list-style-type: none"><li>• Complete tasks or assignments without complete guidance from start to finish, OR</li><li>• The resident could not gather even basic information to answer general patient care questions, OR</li><li>• Other unprofessional actions can be used to determine that the resident needs improvement.</li></ul> <p>This should only be given if the resident did not improve to the level of residency training to date before the end of the rotation.</p>
SP = Satisfactory Progress	<p>This applies to a goal whose mastery requires skill development in more than one learning experience. In the current experience, the resident has progressed at the required rate to attain full mastery by the end of the residency program. This means the resident can:</p> <ul style="list-style-type: none"><li>• Perform most activities with guidance but can complete the requirements without significant input from the preceptor.</li><li>• There is evidence of improvement during the rotation, even if it is not complete mastery of the task.</li></ul> <p>There is a possibility the resident can receive NI on future rotations in the same goal in which SP was received if the resident does not perform at least at the same level as previously noted.</p>
A = Achieved	<p>The resident has fully mastered the goal for the level of residency training to date. No further instruction or evaluation is required in subsequent learning experiences. This means that the resident has consistently performed the task or expectation without guidance.</p>
ACHR = Achieved for the Residency	<p>The preceptors and Residency Program Director will collaborate as needed throughout the residency year to determine if the resident consistently performs the objective independently at the Achieved level, as defined above, across multiple rotation experiences for the residency program. Evaluating the resident will no longer be required on this goal, but any preceptor has the opportunity to provide additional feedback as necessary.</p>



## PGY2 Program Purpose

PGY2 pharmacy residency programs build on Doctor of Pharmacy (Pharm.D.) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who successfully complete an accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized positions, along with board certification, if available

# PGY2 Clinical Pharmacogenomics

## Overview

The St. Jude Children's Research Hospital post-graduate year 2 (PGY2) specialized Residency in Clinical Pharmacogenomics is a one-year experience providing advanced training in the implementation and application of pharmacogenetic testing in clinical practice. The resident trains with professional and technical personnel involved in both patient care and pharmaceutical research and is integrally involved in St. Jude's institution-wide program to implement pre-emptive pharmacogenetic testing ([www.stjude.org/pg4kds](http://www.stjude.org/pg4kds)). The resident will provide pharmacogenetic consultations in the context of a comprehensive approach to pharmaceutical care integrated into the clinical practice areas for St. Jude: general hematology/oncology, bone marrow transplantation, and ambulatory care. Training will be provided in applied pharmacokinetics, oncology supportive care, nutrition support, and advanced pediatric pharmacotherapy. In addition, the resident will develop the computational tools necessary for integration of pharmacogenomics into routine patient care. Specifically, the resident will create automated pharmacogenetic clinical consultations and help develop clinical decision-support based rules for alerting clinicians of high risk gene-drug pairs to allow for genetically guided drug dosing. The resident will participate in patient and clinician education, drug information, and quality improvement activities. An independent research project will be carried out during the course of the residency, with presentation of the findings at a national meeting. Upon completion of the program, the resident will have the clinical skills and necessary experience to practice in the field of clinical pharmacogenomics, and to implement pharmacogenetic testing in other health-system settings.

## CAGOs

The most current competency areas, goals, and objectives for the for the PGY2 Clinical Pharmacogenomics Pharmacy Residency can be found [HERE](#)

## Learning experiences

### Required Rotations

- Orientation
- Inpatient Chemotherapy Service (3 weeks)
- Inpatient Pediatric Oncology (3 weeks)
- Outpatient Pediatric Oncology (3 weeks)
- Clinical Pharmacogenomics Service (8-month longitudinal experience)
- Major Research Project (longitudinal)
- Education and Teaching (longitudinal)

### One Elective Rotation (1 month)

Choose from:

- Inpatient Solid Tumor/Neuro-Oncology
- Inpatient Hematopoietic Stem Cell Transplant
- Inpatient Pediatric Hematology/Oncology ICU and Surgery
- Solid Tumor/Neuro-Oncology Ambulatory Care
- Infectious Disease Ambulatory Care
- Clinical Informatics

## Required Presentations

- Research Project proposal
- 3 30-minute Presentations (e.g., Journal Club, patient cases, implementation proposal)
- Regional Residency Conference Presentation
- 1 ACPE accredited lecture
- 1 lecture at University of Tennessee

## Required Content Areas

**Table 1.** Clinical content areas for a PGY2 Clinical Pharmacogenomics residency

REQUIRED Content Areas		
Content Area	Direct Patient Care Experience Required	Case-Based Application Acceptable
GI Pharmacogenomics	<ul style="list-style-type: none"> <li>• <i>CYP2C19</i>- proton pump inhibitors</li> <li>• <i>CYP2D6</i>- ondansetron</li> <li>• <i>TPMT</i>- thiopurines</li> </ul>	
Oncology Pharmacogenomics	<ul style="list-style-type: none"> <li>• <i>CYP2D6</i>- ondansetron</li> <li>• <i>TPMT</i>- thiopurines</li> </ul>	<ul style="list-style-type: none"> <li>• <i>CYP2D6</i>- tamoxifen</li> <li>• <i>DPYD</i>- 5-fluorouracil, capecitabine</li> <li>• <i>G6PD</i>- rasburicase</li> <li>• <i>UGT1A1</i>- irinotecan</li> </ul>
Pain Pharmacogenomics	<ul style="list-style-type: none"> <li>• <i>CYP2C19</i>, <i>CYP2D6</i>- tricyclic antidepressants (TCAs)</li> <li>• <i>CYP2D6</i>- codeine, tramadol, hydrocodone, oxycodone</li> </ul>	

All of the Content Areas below must be covered with at least Case-Based Application, with a minimum of 1 Content Area with Direct Patient Care Experience.		
Content Area	Direct Patient Care Experience	Case-Based Application Acceptable
Cardiology Pharmacogenomics		<ul style="list-style-type: none"> <li>• <i>CYP2C19</i>- clopidogrel</li> <li>• <i>CYP2C9</i>, <i>VKORC1</i>, <i>CYP4F2</i>- warfarin</li> <li>• <i>SLCO1B1</i>- simvastatin</li> </ul>
Infectious Disease Pharmacogenomics	<ul style="list-style-type: none"> <li>• <i>CYP2C19</i>- voriconazole</li> <li>• <i>HLA-B*57:01</i>- abacavir</li> </ul>	<ul style="list-style-type: none"> <li>• <i>IFNL3</i>- PEG interferon alpha</li> <li>• <i>UGT1A1</i>- atazanavir</li> </ul>
Neurology Pharmacogenomics		<ul style="list-style-type: none"> <li>• <i>CYP2C9</i>, <i>HLA-B*15:02</i>- phenytoin</li> <li>• <i>HLA-B*15:02</i>, <i>HLA-A*31:01</i>- carbamazepine/oxcarbazepine</li> </ul>
Psychiatry Pharmacogenomics	<ul style="list-style-type: none"> <li>• <i>CYP2C19</i>, <i>CYP2D6</i>- tricyclic antidepressants (TCAs)</li> <li>• <i>CYP2C19</i>, <i>CYP2D6</i>- selective serotonin reuptake inhibitors (SSRIs)</li> </ul>	
Transplant Pharmacogenomics		<ul style="list-style-type: none"> <li>• <i>CYP3A5</i>- tacrolimus</li> </ul>
Other clinical areas		<ul style="list-style-type: none"> <li>• <i>CFTR</i>- ivacaftor</li> <li>• <i>HLA-B*58:01</i>- allopurinol</li> </ul>

**Table 2.** Pharmacogenomics principles to be covered in a PGY2 Clinical Pharmacogenomics residency

PRINCIPLES	REQUIRED	ELECTIVE
Genetics	<ul style="list-style-type: none"> <li>• Basic principles of genetics</li> <li>• Basic principles of genetic testing</li> </ul>	
Pharmacokinetics and pharmacodynamics	<ul style="list-style-type: none"> <li>• Absorption, distribution, metabolism, excretion</li> <li>• Cytochrome P-450 (CYP) and non-CYP enzyme systems</li> <li>• Drug transporters</li> </ul>	
Clinical implementation of pharmacogenomics	<ul style="list-style-type: none"> <li>• Implementation science</li> <li>• Ethical, legal, and social issues of pharmacogenomic testing</li> </ul>	<ul style="list-style-type: none"> <li>• Various patient care models for pharmacogenomics</li> <li>• Reimbursement for pharmacogenomic testing</li> </ul>
Clinical informatics	<ul style="list-style-type: none"> <li>• Clinical decision support</li> </ul>	



Analysis, interpretation, and application of clinical pharmacogenomics literature	<ul style="list-style-type: none"> <li>• Use of evidence-based pharmacogenomics resources (e.g., CPIC guidelines [<a href="https://cpicpgx.org/">https://cpicpgx.org/</a>], Pharmacogenomics Knowledge Base [<a href="https://www.pharmgkb.org/">https://www.pharmgkb.org/</a>]).</li> <li>• Knowledge of key landmark events in the evolution of clinical pharmacogenomics implementation and findings from key publications that document the association of clinical pharmacogenomic testing with favorable health care outcomes.</li> </ul>	
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## Requirements for Successful Completion of the Residency

In order to successfully complete the St. Jude Children's Research Hospital Pharmaceutical Department Residency Program, residents must achieve the following:

1. The resident must obtain a TN license within sixty (60) days from the start of the residency. If a TN license is not obtained within sixty (60) days, further participation in the program will be subject to review by the Residency Program Director, and may result in either dismissal from the program, or extension of the program to account for the delay.
2. The resident must demonstrate full achievement status for at least 80% of the objectives/goals/outcomes required by the residency program overall, with full achievement of 100% of goals R1.1 from the Patient Care Competency Area and R5.1 from the Pharmacogenomics Resource Competency Area.
3. The resident must complete a major residency project, which is typically retrospective research or quality improvement. Project results must be presented at the MidSouth Pharmacy Residents Conference.
4. A resident project must be submitted in manuscript format appropriate for publication. Publication of project is not required for residency completion. However, consistent with St. Jude's academic focus and commitment to freely share new knowledge, residents should work toward publication of the project in a peer reviewed journal.
5. Unless there are extenuating circumstances (as judged by the RPD), the resident must participate in ASHP Midyear Clinical Meeting. Attendance at other conferences as deemed appropriate by RPD is possible.
6. The resident must create and deliver at least 7 presentations (see above). Other presentations may be assigned.



# PGY2 Infectious Diseases Pharmacy

## Overview

St. Jude Children's Research Hospital (St. Jude) in collaboration with Le Bonheur Children's Hospital (LBCH) offers a 12-month (minimum of 52 week) PGY2 Infectious Diseases Pharmacy Residency with a focus on pediatrics. The St. Jude / LBCH partnership provides the resident advanced training with experienced preceptors in ID pharmacotherapy for a diverse range of pediatric patient populations including those with immunocompromise. The resident will gain clinical experience at both sites with general ID consult services and transplant ID consult services for bone marrow and solid organ transplant. St. Jude offers special ID experiences in oncology and non-malignant hematology (primarily sickle cell disease). LBCH offers ID experiences in general pediatrics and critical care. LBCH (with UTHSC) offers extensive academic opportunities including didactic lectures and precepting students on clinical rotation. The resident will be expected to complete a major project relevant to infectious diseases. Experiences during the residency will enable the resident to pursue a career focused on infectious diseases in a wide range of pediatric populations.

## CAGOs

The most current competency areas, goals, and objectives (CAGOs) from ASHP (effective 2017) for the PGY2 Infectious Diseases Pharmacy residency can be found [HERE](#).

## Learning experiences (includes orientation)

### Residency Timeline

Learning Experience	Type	Status	Site	Format	Duration	Sequence And Comments
Orientation	Administrative	Required	Both	Rotation	4 weeks / 1 month	July
ID Consult Service	Patient Care	Required	St. Jude	Rotation	4 weeks / 1 month	Fall
ID Consult Service	Patient Care	Required	LBCH	Rotation	4 weeks / 1 month	Fall
Bone Marrow Transplant ID	Patient Care	Required	St. Jude	Rotation	4 weeks / 1 month	Fall or Winter
Solid Organ Transplant ID	Patient Care	Required	LBCH	Rotation	4 weeks / 1 month	Fall or Winter
Administrative	Administrative	Required	St. Jude	Rotation	4 weeks /	December



## **Presentations (Required)**

- Major project proposal
- One Clinical Pharmacist Meeting Presentation
- Regional Residency Conference Presentation
- One ACPE-accredited lecture
- Two formal didactic lectures at a College of Pharmacy

## **Required Content Areas**

The required content areas from ASHP (effective 2017) for the PGY2 Infectious Diseases Pharmacy residency can be found [HERE](#) in the Appendix on page 27. The appendix stipulates core areas or types of patient care experiences to be met either through direct patient care experiences, or for those marked by an asterisk (\*) through didactic discussion, reading assignments, case presentations, and/or written assignments. Meeting the required content area will be tracked by the residency in PharmAcademic™.

## **Completion:**

To successfully complete the St. Jude Children's Research Hospital PGY2 Infectious Diseases Pharmacy Residency Program, the following requirements must be met [as per Standard 2.5]:

1. The resident must demonstrate full achievement status for > 80% objectives/goals/outcomes required by the residency program. The resident must achieve 100% of goals R1.1 and R1.2 from the Patient Care Competency Area.
2. The resident must complete a residency research project. Project results must be presented at the MidSouth Pharmacy Residents Conference.
3. The resident project must be submitted in manuscript format appropriate for publication. Publication of project is not required.
4. The resident must create and deliver at least six (6) presentations as stipulated above under "Presentations".
  - a. These will include but are not limited to presentations for their research project, patient cases, journal clubs, a lecture at the University of Tennessee, and an ACPE presentation. Other presentations may be assigned by the RPD or other preceptors.
5. The resident will complete longitudinal projects that will include: a guideline or policy review, protocol review, and journal referee.
6. The resident will complete the required core areas or types of patient care experiences as delineated in the ASHP PGY2 ID Pharmacy Residency Standard's Appendix and stipulated above under "Required Content Areas".

## Encouraged but not required:

- Travel to and attendance of professional meeting such as SIDP/IDweek, ASHP Midyear Clinical Meeting, and the International Pediatric Antimicrobial Stewardship Conference is encouraged but not required. Support in the form of educational leave (per page 12) and use of my St. Jude employee Personal Development Account (PDA) (about \$2,500.00) is provided for meetings (per page 14) ; additional departmental funds for these specific meetings have been requested and may be available.
- If not completed during the PGY1, completion of a teaching certificate is offered and encouraged, but not required.
- Completion of a medication use evaluation (MUE).

# PGY2 Medication-Use Safety and Policy

## Overview

The St. Jude Children's Research Hospital Medication-Use Safety and Policy Residency is a 12-month ASHP-accredited PGY2 residency program that provides advanced training in medication safety and medication -use policy. The complex and high-risk nature of treatment provided at St. Jude provides a unique learning environment for patient safety and medication policy that can be applied to any health care setting.

The resident will gain experience in medication error and adverse drug event reporting processes, lead medication safety assessments and improvement efforts to prevent future events and work to maximize the patient safety benefits of the electronic health record. Emphasis will be placed on leading and coordinating Cause Analyses, managing a medication use safety team/committee, and participating in methods to improve event detection and event reporting. The resident will also participate in both administrative and patient care aspects of the St. Jude medication-use process, including coordination of a pharmacy and therapeutics committee, guideline and policy development, regulatory readiness, completion of medication-use evaluations and audits, formulary management and adverse drug reaction analysis.

Along with medication safety and policy experiences, the resident will provide lectures and precept pharmacy students. The resident will be expected to complete a major project focused on medication safety or policy. Experiences during the residency will enable the resident to seek a career focused on medication safety or medication-use policy.

## CAGOs

The most current competency areas, goals, and objectives for the PGY2 Medication-Use Safety and Policy can be found [HERE](#).

## Learning experiences (include orientation)

### Required Rotations

- Orientation (1 month)
- Clinical Oncology (4 weeks)
- Medication Safety (longitudinal)
- Medication-Use Policy (longitudinal)
- Informatics and Precepting (longitudinal)
- Pharmacy Operations (longitudinal)
- Major Project (longitudinal)
- Education and Presentations (longitudinal)

- Professionalism and Leadership (longitudinal)

### **One Elective Rotation (1 month)**

Choose from:

- Available clinical rotations
- Pharmacy Investigational Services
- Pharmacogenomics
- Outside elective rotation (ASHP, ISMP, Adult medication safety) – with discussion with Residency Program Director

## **Presentations**

- Major project proposal
- One Clinical Pharmacist Meeting Presentation
- Regional Residency Conference Presentation
- One ACPE-accredited lecture
- One lecture at the University of Tennessee Health Science Center, College of Pharmacy

## **Completion**

1. To successfully complete the St. Jude Children's Research Hospital Pharmaceutical Department Residency Program, residents must achieve the following:
  - a. The resident must obtain a TN license within sixty (60) days from the start of the residency. If a TN license is not obtained within sixty (60) days, further participation in the program will be subject to review by the Residency Program Director and may result in either dismissal from the program or extension of the program to account for the delay.
  - b. The resident must demonstrate full achievement status for at least 80% of the objectives/goals/outcomes required by the residency program overall.
  - c. The resident must complete a major residency project.. Project results must be presented at the MidSouth Pharmacy Residents Conference.
  - d. A resident project must be submitted in manuscript format appropriate for publication. Publication of project is not required for residency completion. However, consistent with St. Jude's academic focus and commitment to freely share new knowledge, residents should work toward publication of the project in a peer reviewed journal.
  - e. Unless there are extenuating circumstances (as judged by the Residency Program Director), the resident must participate at the ASHP Midyear Clinical Meeting. Attendance at other conferences as deemed appropriate by the Residency Program Director is possible.
  - f. The resident must create and deliver at least 5 presentations (see above). Other presentations may be assigned.
  - g. The resident will complete longitudinal projects that will include the following: formulary review/monograph, guideline or policy review, performance improvement project, medication use evaluation, nonformulary drug reviews, meeting minutes, event

investigations (including cause analyses), proactive risk assessments like FMEA, and safety trigger review.

# PGY2 Oncology, Pediatric Focus

## Overview

The St. Jude Children's Research Hospital Oncology Pharmacy Residency with a Pediatric Focus is a one-year ASHP-accredited PGY2 program that provides advanced training in clinical therapeutics for the pediatric cancer patient, an introduction to clinical research, and organized experiences for the management of sophisticated pharmacy service programs. The residency includes training in applied pharmacokinetics, pharmacogenetics, nutrition support, pediatric pharmacotherapy (clinical pharmacology of anticancer drugs, infectious disease, and pain management), and unique practice settings such as critical care and bone marrow transplantation – all involving care across the inpatient-outpatient continuum. The resident will participate in patient education, drug information, Pharmacy and Therapeutics functions, quality improvement programs, fiscal planning, and program development. Experience in teaching is acquired through providing lectures, in-services, journal club presentations, and precepting pharmacy students from the University of Tennessee and other colleges of pharmacy. Training in clinical research and participation in collaborative clinical protocols will be provided. An independent project will be carried out during the residency year. The resident is guided by individuals from the department faculty, administration, and professional staff.

## CAGOs

The competency areas, goals, and objectives for the PGY2 Oncology Pharmacy Residency were prepared jointly with the Hematology/Oncology Pharmacy Association. The most current CAGOs can be found [HERE](#)

## Learning experiences

### Required Rotations

- Orientation
- Pharmacy Operations
- Chemotherapy
- Inpatient Leukemia/Lymphoma
- Inpatient Solid Tumor/Neuro-Oncology
- Inpatient Bone Marrow Transplantation and Cellular Therapy
- Outpatient Leukemia/Lymphoma
- Outpatient Bone Marrow Transplantation and Cellular Therapy
- Outpatient Solid Tumor/Neuro-Oncology
- Non-malignant Hematology
- Medication Outcomes and Clinical Administration



### Longitudinal Rotations

- Adult Oncology
- Antimicrobial Stewardship, Infectious Diseases, Pharmacokinetics
- Professionalism and Leadership
- Major Research Project
- Education and Teaching
- Investigational Studies

### Elective Rotations

Choose from:

- Advanced/Repeat clinical rotation
- Pediatric Pain and Palliative Care
- PICU
- Pharmacogenomics
- Other experiences may be developed if resident interest

## Presentations

- Project proposal
- 2 Clinical Pharmacist Meeting Presentation
- Journal Club
- Regional Residency Conference Presentation
- 1 ACPE accredited lecture
- 1 lecture at UTHSC

## Required Content Areas

Pediatric Oncology Pharmacy-focused Programs			
	REQUIRED	REQUIRED	ELECTIVE
TOPIC AREAS	Direct Patient Care Experience Required	Case-Based Application Acceptable	
<b>Pediatric Hematologic Malignancies</b>	<ul style="list-style-type: none"><li>• Acute lymphoblastic leukemia (ALL)</li><li>• Acute myelogenous leukemia (AML)</li><li>• Hodgkin lymphoma</li><li>• Non-Hodgkin lymphoma</li></ul>	<ul style="list-style-type: none"><li>• Chronic myelogenous leukemia (CML)</li><li>• Chronic lymphocytic leukemia (CLL)</li><li>• Multiple myeloma</li></ul>	<ul style="list-style-type: none"><li>• Amyloidosis</li><li>• Myelodysplastic syndromes</li><li>• Myeloproliferative disorders</li><li>• Primary CNS lymphoma</li><li>• Waldenströms Macroglobulinemia</li></ul>

<b>Hematological Disorders</b>		<ul style="list-style-type: none"> <li>• Sickle cell anemia</li> <li>• Aplastic anemia</li> <li>• Hemophilia A</li> <li>• Hemophilia B</li> <li>• Iron deficiency anemia</li> </ul>	<ul style="list-style-type: none"> <li>• Hemolytic anemia</li> <li>• Immune thrombocytopenic purpura (ITP)</li> <li>• Paroxysmal nocturnal hemoglobinuria</li> <li>• Hemophagocytic lymphohistiocytosis (HLH)</li> <li>• Porphyria</li> <li>• Thrombotic thrombocytopenic purpura (TTP)/Hemolytic uremic syndrome (HUS)</li> <li>• Von Willebrand's disease</li> </ul>
<b>Pediatric Solid Malignancies</b>	<ul style="list-style-type: none"> <li>• CNS Tumors</li> <li>• Ewing sarcoma</li> <li>• Neuroblastoma</li> <li>• Osteosarcoma</li> <li>• Wilms tumor</li> </ul>	<ul style="list-style-type: none"> <li>• Retinoblastoma</li> <li>• Hepatoblastoma</li> <li>• Rhabdomyosarcoma</li> </ul>	<ul style="list-style-type: none"> <li>• Langerhans Cell Histiocytosis</li> </ul>
<b>Supportive Care/Symptom Management</b>	<ul style="list-style-type: none"> <li>• Anemia</li> <li>• Constipation</li> <li>• Diarrhea</li> </ul>	<ul style="list-style-type: none"> <li>• Extravasation</li> <li>• Hypersensitivity reactions</li> <li>• Malignant effusions</li> </ul>	<ul style="list-style-type: none"> <li>• Infertility</li> <li>• Secondary malignancies</li> </ul>
	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Infection prophylaxis and management</li> <li>• Mucositis</li> <li>• Myelosuppression</li> <li>• Nausea and vomiting</li> <li>• Neutropenic fever</li> <li>• Organ-systems toxicity (i.e. - cardiotoxicity, dermatologic, hepatotoxicity, nephrotoxicity, neurotoxicity, pulmonary)</li> <li>• Pain management</li> <li>• Thrombosis</li> <li>• Tumor lysis syndrome</li> </ul>	<ul style="list-style-type: none"> <li>• Radiation complications</li> <li>• Survivorship</li> <li>• Spinal cord compression syndrome</li> <li>• Superior vena cava syndrome</li> </ul>	<ul style="list-style-type: none"> <li>• Hypercalcemia of malignancy</li> </ul>

<b>Transplantation</b>	<ul style="list-style-type: none"> <li>• Autologous hematopoietic stem cell therapy</li> <li>• Infection prophylaxis</li> <li>• Mobilization</li> <li>• Preparative regimens</li> <li>• Vaccinations</li> </ul>	<ul style="list-style-type: none"> <li>• Allogeneic hematopoietic stem cell therapy</li> <li>• Graft-versus-host disease (prophylaxis, management of acute and chronic)</li> <li>• Immunosuppression</li> <li>• Infection prophylaxis</li> <li>• Preparative regimens</li> <li>• Sinusoidal obstruction syndrome</li> <li>• Vaccinations</li> </ul>	
<b>Adult Malignancies</b>		<ul style="list-style-type: none"> <li>• Breast cancer</li> <li>• Colon cancer</li> <li>• Melanoma</li> <li>• Non-small cell lung cancer</li> <li>• Ovarian cancer</li> <li>• Prostate cancer</li> </ul>	<ul style="list-style-type: none"> <li>• Anal cancer</li> <li>• Adult sarcomas</li> <li>• Bladder cancer</li> <li>• Carcinoid cancer</li> <li>• Carcinoma of unknown primary</li> <li>• Cervical cancer</li> <li>• CNS malignancies</li> </ul>
		<ul style="list-style-type: none"> <li>• Small cell lung cancer</li> <li>• Germ cell tumors</li> </ul>	<ul style="list-style-type: none"> <li>• Endocrine tumors</li> <li>• Endometrial cancer</li> <li>• Esophageal cancer</li> <li>• Gastric cancer</li> <li>• Head and Neck cancer</li> <li>• Hepatobiliary cancers</li> <li>• Mesothelioma</li> <li>• Non-melanoma skin cancers</li> <li>• Pancreatic</li> <li>• Rectal</li> <li>• Renal cell cancer</li> <li>• Thyroid cancer</li> </ul>

# Completion

To successfully complete the St. Jude Children's Research Hospital Pharmaceutical Department Residency Program, residents must achieve the following:

1. TN licensure within sixty (60) days from the start of the residency. If a TN license is not obtained within sixty (60) days, further participation in the program will be subject to review by the RPD and may result in either dismissal from the program or extension of the program to account for the delay.
2. Full achievement status for  $\geq 80\%$  objectives/goals/outcomes required by the residency program. The resident must achieve 100% of goals R1.1 and R1.2 from the Patient Care Competency Area.
3. Complete a residency research project. Project results must be presented at the MidSouth Residency Conference.
4. Submit project in manuscript format appropriate for publication.
5. Participate in ASHP MidYear Clinical Meeting, PPA or HOPA Annual Conference, or other conferences as deemed appropriate by the RPD.
6. The resident must create and deliver at least 6 presentations (see above).
7. Complete longitudinal projects that include: guideline or policy review, protocol review, and journal referee.
8. Complete required adult oncology topics.

# PGY2 Pharmacy Informatics

## Overview/Purpose

The one-year PGY-2 residency in Pharmacy Informatics at St. Jude Children's Research Hospital is designed to foster expertise in medication-use systems and informatics while providing an applicant with a comprehensive understanding of pharmaceutical data analytics. Residents will become versed in pediatric and research informatics while embracing the guiding principles of medication safety. The resident will support St. Jude's mission while working with interdepartmental stakeholders as a member of the Pharmaceutical Services Informatics (PSI) team. Experience in teaching is acquired through providing lectures, in-services, journal club presentations, and precepting pharmacy students from the University of Tennessee and other colleges of pharmacy.

The Pharmacy Informatics Community aims to implement, maintain, and optimize best-in-class medication use technology solutions and analytics for our customers in support of exceptional pharmaceutical care. Through collaboration with clinical staff (our customers), Quality and Patient Care, and Information Services, we strive to facilitate practical solutions that achieve optimal patient outcomes, workflow efficiency, and resource stewardship within the medication use process at St. Jude Children's Research Hospital.

## CAGOs

The most current competency areas, goals, and objectives for the PGY2 Pharmacy Informatics Residency can be found [HERE](#).

## Learning experiences:

Residents are expected to balance two rotations alongside an assigned project from Q2-Q4.

### Required Rotations

- Orientation (4 weeks)
- Operational Leadership and Change Management (6 weeks + Staffing Component)\*
- Technology Leadership and Administration (8 weeks)\*
- Applied Clinical Informatics I (10 weeks)
- Applied Clinical Informatics II (10 weeks)
- Applied Clinical Informatics III (10 weeks)
- Beacon & Research Pharmacy Services (10 weeks)
- Clinical Decision Support and Medication Safety (12 weeks)
- Pharmaceutical Data Analytics (12 weeks)
- Longitudinal Informatics Project & Teaching Experience (Longitudinal)

\*EHR Credentialing occurs in tandem with learning experiences during Q1 of residency

Example Resident Rotation Calendar:

	7-Jul	14-Jul	21-Jul	28-Jul	4-Aug	11-Aug	18-Aug	25-Aug	1-Sep	8-Sep	15-Sep	22-Sep	29-Sep	6-Oct	13-Oct	20-Oct	27-Oct	3-Nov	10-Nov	17-Nov	24-Nov	1-Dec	8-Dec	15-Dec	22-Dec	29-Dec	5-Jan	12-Jan	19-Jan	26-Jan	2-Feb	9-Feb	16-Feb	23-Feb	2-Mar	9-Mar	16-Mar	23-Mar	30-Mar	6-Apr	13-Apr	20-Apr	27-Apr	4-May	11-May	18-May	25-May	1-Jun	8-Jun	15-Jun	22-Jun	29-Jun
Orientation																																																				
Operational Practice and Change Management																																																				
Technology Leadership and Administration																																																				
Applied Clinical Informatics (Acute Care Focus)																																																				
Applied Clinical Informatics (Ambulatory Focus)																																																				
Applied Clinical Informatics (CPS Focus)																																																				
Beacon & Research Pharmacy Services																																																				
Medication Safety & Clinical Decision Support																																																				
Pharmacy Data Analytics																																																				
Informatics Project & Teaching Experience																																																				
Residual Task Completion and/or Elective																																																				

## Presentations

1. Project Proposal
2. Clinical Pharmacist Meeting Presentation
3. Regional Residency Conference Presentation
4. 1 ACPE Accredited Lecture

## Completion

1. To successfully complete the St. Jude Children's Research Hospital Pharmaceutical Department Residency Program, residents must achieve the following:
  - a. The resident must obtain a TN license within sixty (60) days from the start of the residency. If a TN license is not obtained within sixty (60) days, further participation in the program will be subject to review by the Residency Program Director and may result in either dismissal from the program or extension of the program to account for the delay.
  - b. The resident must demonstrate full achievement status for at least 75% of the objectives/goals/outcomes required by the residency program overall.
  - c. The resident must complete a major residency project, which is typically a technology implementation or quality improvement initiative. Project results must be presented at the Midsouth Pharmacy Residents Conference.
  - d. A resident project must be submitted in manuscript format appropriate for publication. Publication of project is not required for residency completion. However, consistent with St. Jude's academic focus and commitment to freely share new knowledge, residents should work toward publication of the project in a peer reviewed journal.
  - e. Unless there are extenuating circumstances (as judged by the Residency Program Director), the resident must participate in the ASHP Midyear Clinical Meeting. Attendance at other conferences as deemed appropriate by the Residency Program Director is possible.
  - f. The resident must create and deliver at least 4 presentations (see above). Other presentations may be assigned.

# Teaching Certificate

St. Jude Children's Research Hospital residents can participate in the Teaching and Learning Program through the University of Tennessee College of Pharmacy.

This program is a structured educational program allowing residents to develop the foundation to be a pharmacy educator. Residents gain knowledge in educational theory, principles of learning, and effective teaching techniques. Residents attend seminars and workshops led by the college faculty and preceptors, as well as lead experiential and didactic teaching activities.

Additional information can be found at [HERE](#)

# Program Quality and Improvement

We are continuously looking for ways to improve our programs. Formal feedback is solicited from current residents at the midpoint and end of the residency year. Additionally, program director, coordinator, and resident meeting routinely occur to assess opportunities for improvement.

At the conclusion of each residency a formal survey is sent to all preceptors to gauge what changes might be beneficial for the upcoming residency year. Results from these surveys are kept in a secure location that is accessible by members of the Residency Directors Committee. A summary will be presented annually to the Residency Advisory Committees.