



FELLOWSHIP EMPLOYMENT MANUAL

DIVISION-SPECIFIC SECTION

PULMONARY

Please Refer to the Hospital-Wide Manual for Further Details

CHILDREN'S HOSPITAL AND RESEARCH CENTER OAKLAND

2009-2010

This manual to be used in conjunction with the Resident Manual for CHRCO

**CHILDREN'S HOSPITAL & RESEARCH CENTER OAKLAND
2009-2010**

FELLOWSHIP MANUAL – DIVISION SPECIFIC - PULMONARY

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1. Introduction

See Hospital-Wide Manual

Mission and Code of Conduct

See Hospital-Wide Manual

Fellowship Program Goals and Objectives

The field of Pediatric Pulmonology encompasses a broad array of disorders of children and adolescents with respiratory disorders.

The intent of CHRCO fellowship programs is to train pediatricians in the prevention, diagnosis and management of disease so as to provide comprehensive, compassionate care for children and adolescents. The hospital's training programs are unique and diverse, though they hold to a common goal to provide future academic pediatricians with a foundation to become competent clinicians, researchers, and teachers. To achieve this, our training programs hold to the following objectives:

- To provide the clinical experiences and educational opportunities necessary to build a solid foundation of medical knowledge, critical thinking abilities, literature review, diagnostic acumen and technical skills.
- To provide academic pediatricians the research training and experience to develop careers as physician-scientists.
- To train well-rounded, empathetic clinicians to develop skills in communication and counseling with patients and families.
- To impart to our fellows the skills necessary to become lifelong learners and teachers, develop leadership skills and work effectively with team members.
- To impart to our fellows a sense of responsibility to act as advocates for the health of children and families within our society.
- To expose our fellows to the concept of multi-institutional collaborative research and encourage them to become active members of the profession's national societies.
- To prepare future pediatric pulmonologists for the changes taking place within our health care system, including managed care, limitations on resource utilization, and the shift of medical care to ambulatory settings.

- To create pediatric pulmonologists able to practice the culturally competent medical care necessary in our increasingly diverse population.
- To teach professionalism by mentorship, validating the critical roles of personal ethics, responsibility, respect, compassion, communication, and self-awareness.
- To educate our fellows on current national guidelines and evidence-based recommendations.
- To train in aspects of quality care and understand microsystems and continuous processes to evaluate and determine changes/needs in order to enact and monitor outcomes.
- To provide our training in an environment of respect and support, recognizing that fellowship is a difficult and challenging time in one's life.

2. Employment Policies

A. Recruitment, General Selection Requirements and Appointment

Pulmonary Specific Selection Requirements: Letter of interest, three letters of recommendation from current mentors, CV, California license (this requires at least two years of pediatric residency within the United States), telephone interview, screened applicants after phone interview are invited for face-to-face interviews. Evaluations from all interviewers are discussed by the BAPP team and BAPP Board makes final decisions on hiring. Medical staff appointment at CHRCO required (this will include a background check and credentials verification).

Appointment:

1. Fellows accepted into ACGME-accredited programs sponsored by CHRCO will be provided a length of training sufficient to meet the American Board of Pediatric requirements for certification in their respective specialty or subspecialty, unless their performance proves unsatisfactory. Likewise, fellows accepting a position in a training program are expected to stay in the program until completion. Training programs have no obligation to allow continuation from year to year of a fellow judged to be unsatisfactory.
2. All fellows are required to give formal notice of their intention to continue in the program at least six months prior to the start of the next academic year. All fellows who elect to continue their residency training, as long as their performance has not been judged unsatisfactory, shall receive an individual written letter of appointment accompanied by a copy of the current Fellowship Employment Manual. This letter shall include the current salary scale for their level of training and set forth the general terms and conditions of employment at Children's Hospital &

Research Center at Oakland. This letter of appointment must be signed and returned to the Program Director at least one month prior to the start of the academic year.

B. Medical Staff Appointment

All fellows are **required** to join the Medical Staff at Children's Hospital and Research Center Oakland. Reimbursement of Medical Staff dues will be provided by the Pulmonary Division. Fellows on the medical Staff must comply with all the medical staff rules and regulations as stipulated in the bylaws.

C. Training Courses

All pulmonary fellows are required to acquire PALS certification prior to beginning clinical duties, and maintain certification throughout their period of fellowship training. PALS is required for appointment to the Medical Staff.

D. Employee Health

See Hospital-Wide Manual

E. Licensure

See Hospital-Wide Manual

F. Examinations

1. American Board of Pediatrics

All fellows are **required** to take the American Board of Pediatrics certification examination during the first year of fellowship, if not previously certified. Certification in General Pediatrics is required prior to taking the sub-board examination.

2. In-Training Examination

All fellows are required to take the annual Sub-specialty In-Training Examination (SITE), as given by the American Board of Pediatrics. The fee for SITE will be reimbursed by the Pulmonary Division.

G. Library Policies

See Hospital-Wide Manual

The Pulmonary Division maintains a subspecialty library in the outpatient clinic for the general use of the staff.

H. Medical Records

See Hospital-Wide Manual

I. Schedules

See Hospital-Wide Manual

J. Shared Positions

See Hospital-Wide Manual

K. Fellow Duty Hours and the Working Environment

1. General

a. Supervision of Fellows

See Hospital-Wide Manual

b. Duty Hours

See Hospital-Wide Manual for basic duty hour policy.

- Pulmonary fellows will work an average of one weekend per three weeks. This schedule provides each fellow 6 days (3 weekends) off every 4 weeks, or 1.5 days in 7 free from all educational and clinical responsibilities when averaged over a 4-week period. If more than 4 fellows are in the program, call continues to be shared equally and may be less frequent.
- Adequate time for rest and personal activities will always be provided. This will consist of a minimum 10 hour time period provided between all daily duty periods and after in-house call. Because there are no in-house (overnight) call responsibilities, fellows will always have at least 10 hours between daily duties for rest and personal activities.

2. On-Call Activities

See Hospital-Wide Manual for basic on-call information.

- Pulmonary Fellows are required to take at-home call (pager call) approximately every 7 days / 21 days. The frequency of at-home call is not subject to every third night limitation for in-house call. At-home call must not be so frequent as to preclude rest and reasonable personal time for each fellow. Call responsibilities include answering

evening phone consultations from home and evaluating new and follow-up consultations in the hospital during the daytime. Fellows are asked to document the time spent on call and to document the time spent in the hospital if called in to assess patients. The Program Director must monitor the demands of at-home call and make schedule adjustments as necessary to mitigate excessive service demands and/or fatigue.

- When fellows are called into the hospital from home, the hours spent in-house are counted toward the 80-hour limit. The faculty and Program Director ensure that, if one of the fellows has to spend most of the evening and night in the hospital caring for a sick patient, the 24-hour work rule goes into effect. As soon as the fellow finishes basic patient care duty or an essential lecture, they are released to go home for the remainder of the day. Additionally, the Program Director verbally monitors workload with the fellows, especially those on the inpatient service, on a weekly basis.

3. Monitoring

See Hospital-Wide Manual

L. Moonlighting

See Hospital-Wide Manual

M. Dress and Grooming Policy

See Hospital-Wide Manual

N. Paychecks

Fellows are employees of the department. Paychecks are issued on the first of each month. Fellows may elect to have their paychecks deposited directly into their bank account.

O. Salaries

The following salary scale is in effect as of July 1, 2009:

1 st year fellows	\$54,000
2 nd year fellows	\$57,000
3 rd year fellows	\$60,000

The current salary is reflected on the individual letter of appointment.

Research Funding

Funding during the 2nd and 3rd years of the fellowship comes from a combination of grants and department supplementation. Each fellow is encouraged to identify a mentor, a project and be involved in writing and submitting a grant proposal during the first or second year.

P. Vacation

See Hospital-Wide Manual

Q. Holidays

See Hospital-Wide Manual

In general, each fellow will be assigned one long (4 day) holiday annually (Christmas, New Years, Thanksgiving), and one short (3 day) holiday annually (Martin Luther King, Jr., Presidents Day, Labor Day).

R. Illness

See Hospital-Wide Manual

A maximum of ten illness days per year shall be provided to fellow without loss of income. Payment for greater than ten illness days per year must be reviewed with the Program Director and may or may not receive continued payment.

S. Leave of Absence

See Hospital-Wide Manual

1. Maternity Leave

See Hospital-Wide Manual

Division Directors – be sure to review how FMLA, CFRA and SDI affect your practice. If fewer than 50 employees study SDI rules and regulations. If greater than 50 employees study all three policies and insert your Division's ruling on use of vacation time and sick time during a maternity leave.

2. Paternity/Adoptive/Domestic Partner Leave

See Hospital-Wide Manual and “Maternity Leave” above.

SDI provides a maximum of 6 weeks unpaid leave during the first calendar year life of the child. This leave may be taken in divided portions. The use of vacation as part of the leave is at the discretion of the employer. Please review the SDI policy if your group is under 50 employees and determine how you would handle this type of leave. Insert your decision here. The Emergency Room fellows are hospital employees, thus greater than 50 employees are involved in the system and FMLA and CFRA rulings will apply. These two programs provide a longer absence LOA than the SDI.

3. Other Leave

See Hospital-Wide Manual

T. Other Absences

See Hospital-Wide Manual

U. Education Leave and Expenses

See Hospital-Wide Manual

Requests for education leave must be approved in advance by the Program Director. Ninety days notice is required. Receipts must be submitted to the Program Director within ten days. Maximum educational expenses of \$500 are permitted per year.

V. Insurance/Benefits

1. Health/Dental/Vision Coverage

The Pulmonary Division at Children’s Hospital and Research Center Oakland provides comprehensive health and dental insurance to all fellows at no cost. Coverage for legal spouse, dependent and domestic partners is not provided. Fellows may choose from one of the offered plans at the time of their initial employment; thereafter changes are allowed during annual open enrollment only. A limited vision plan with the pulmonary group rate is available at hire and during annual open enrollment. Coverage is effective on the date of hire.

Division paid health insurance coverage is provided to the end of the calendar month following completion of fellowship training. Thereafter, graduates may elect to purchase health insurance for a maximum period of 18 months at the current COBRA rates.

2. Malpractice Insurance

Malpractice insurance in the amounts of \$1 million each claim and \$3 million annual aggregate is available at no cost to fellow from Medical Insurance Exchange of California (MIEC).

3. Life Insurance

The Pulmonary Division provides group term life insurance at no cost to the fellow in the amount of a minimum of \$50,000.

4. Disability Insurance

Disability insurance is provided through the workman's compensation Plan with payroll deduction premiums monthly.

5. Long-Term Care

The Pulmonary Division does not provide a long-term care policy.

6. Retirement Plan

The Pulmonary Division participates in a 401k, pension and profit-sharing plan. Under the terms of the agreement, the Department will contribute a minimum of 3% of the total base compensation each employment year. Fellows may also make contributions and are encouraged to seek financial advice regarding such. Information regarding vesting should be discussed with the Benefits Manager and is also addressed in the employee contract.

W. Parking

Parking expenses are covered by the Pulmonary Division.

X. Office Space

Shared/private office space is provided for fellows and is located on the 5th Floor of the OPC Building. This office provides ample space for books, files, and personal belongings. Computers and HIS terminals are available in the office. Mailboxes are located in the Pulmonary Office.

Y. Housing/Laundry/Meals

As fellows are not expected to take in-house call, no provisions have been made to offer housing, laundry facilities, or meals.

Z. Employee Assistance Program (EAP)

See Hospital-Wide Manual

AA. Harassment

See Hospital-Wide Manual

BB. Physician Impairment/Substance Abuse

See Hospital-Wide Manual

CC. Evaluations/Promotional Review

1. General Policies

See Hospital-Wide Manual

2. Academic Probation

See Hospital-Wide Manual

3. Non-Renewal of Agreement

See Hospital-Wide Manual

4. Appeal Procedures

See Hospital-Wide Manual

5. Requirements for Promotion

See Hospital-Wide Manual

a. Expectations for Skills at the End of the First Year

- Fellows are expected to have performed independently the common pulmonary procedures, which include:
 - ABG, Draw and Interpret
 - Advanced Life Support
 - Aerosol Delivery
 - Basic Procedural Sedation

- Bronchoalveolar Lavage
- Bronchoscopy
- Ciliary Biopsy
- CXR Interpretation
- Diskus Use
- Exercise Test
- Flexhaler Use
- FVL Performance
- Intubation, Bronchoscopic
- Intubation, Direct
- IOS Interpretation
- IOS Performance
- IPFT Interpretation
- Laryngeal Mask Airway
- Management of Invasive Ventilators
- Management of NIPPV Ventilators
- Mask Ventilation
- MDI and DPI Use With and Without Chamber
- Performance of History and Physical
- PFT Interpretation
- Polysomnographic Interpretation
- Smoking Cessation
- Trach Change
- Twisthaler Use

b. Promotion in the Research Years

See Hospital-Wide Manual

DD. Grievances

See Hospital-Wide Manual

EE. Disciplinary Guidelines

See Hospital-Wide Manual

FF. Fellowship Program Closure/Reduction

See Hospital-Wide Manual

GG. Disaster Policy

See Hospital-Wide Manual

HH. Vendor Interactions Policy

See Hospital-Wide Manual

II. Institutional Agreements

See Hospital-Wide Manual

JJ. Committee Representation

See Hospital-Wide Manual

The Pulmonary Division requires the second year fellow to represent Pulmonary interests on the GME Committee. The third year fellow is assigned a QI role with a pulmonary attending to develop the CF Education Seminars for that year.

KK. Division Meetings

See Hospital-Wide Manual

The Pulmonary Division meets monthly for the Pulmonary Division and BAAP Dinner Meetings. All fellows are required to attend.

LL. Accommodations for Disabilities

See Hospital-Wide Manual

3. Clinical Responsibilities

A. Activities and Charting Requirements

See Hospital-Wide Manual

1. History and Physical

See Hospital-Wide Manual

2. Progress Notes

See Hospital-Wide Manual

3. Orders

See Hospital-Wide Manual

4. Admission

See Hospital-Wide Manual

5. Discharge

See Hospital-Wide Manual

B. Informed Consent

See Hospital-Wide Manual

Informed consent is an integral component of practicing clinical pulmonology procedures, including bronchoscopy and sedated infant pulmonary function testing. Consents must be obtained and placed in the chart. Also, a notation should be made on the patient's Bulletin Board in HIS PCI of type of consent obtained and date.

C. Confidentiality of Information

See Hospital-Wide Manual

D. Do Not Resuscitate (DNR) / Allow Natural Death (AND) Policies

See Hospital-Wide Manual

E. Deaths/Autopsies

See Hospital-Wide Manual

F. Procedural Competencies

See Hospital-Wide Manual

The technical skills deemed required are:

- ABG, Draw and Interpret
- Advanced Life Support
- Aerosol Delivery
- Basic Procedural Sedation
- Bronchoalveolar Lavage
- Bronchoscopy
- Ciliary Biopsy

- CXR Interpretation
- Diskus Use
- Exercise Test
- Flexhaler Use
- FVL Performance
- Intubation, Bronchoscopic
- Intubation, Direct
- IOS Interpretation
- IOS Performance
- IPFT Interpretation
- Laryngeal Mask Airway
- Management of Invasive Ventilators
- Management of NIPPV Ventilators
- Mask Ventilation
- MDI and DPI Use With and Without Chamber
- Performance of History and Physical
- PFT Interpretation
- Polysomnographic Interpretation
- Smoking Cessation
- Trach Change
- Twisthaler Use

G. Teaching Conferences

See Hospital-Wide Manual

Fellow specific conferences in the Division of Pulmonary follow:

- **Radiology Rounds** occur 1-2 times a week for each inpatient unit and are held in the Radiology Department.
- **Monday Morning Sign-In** rounds provide a review and discussion of the prior weekend (and week) patients on the inpatient service in addition to consultations and advice calls. The fellow and attending on-call the prior weekend are responsible for the presentation of patients. The conference is held every Monday at 7am. Fellows and attendings on the inpatient service are **expected** to attend.
- **Journal Club** is held monthly and is organized by the senior fellow. Topics for discussion and articles are chosen by the fellow and attending responsible for the Journal Club and distributed ahead of time.
- **Clinical Team Meetings** occur monthly at CF QA and BAPP dinner meeting.

- **Fellow's Conference** is comprised of the following meetings:
 - 1) Physiology Conference, held on Tuesdays 7:00-8:00 am, weeks one, two and four. **All fellows and assigned attending are required.** All attendings and other interested parties like visiting residents and staff are welcome.
 - 2) Case Presentation Conference, held every third Tuesday from 7:00-8:00am. **All fellows and assigned attending are required.** Fellows and/or pulmonary resident present short Power Point presentation of a case.
 - 3) Fellow's Core Curriculum, core topics reviewed during the first month of fellowship. The curriculum is scheduled by the senior fellow, and topics are reviewed with the senior fellow and assigned attending to provide the first-year fellow with an introduction to core pulmonary topics.

H. The Educational Program

The program design and sequencing of educational experiences must be approved by the RRC, as part of the accreditation process.

1. ACGME Clinical Core Competencies

- See Hospital-Wide Manual.

2. Scholarly Activities

- See Hospital-Wide Manual.

3. Professionalism

- See Hospital-Wide Manual.

I. Curriculum for the Clinical Year/Portion of Fellowship

- See Hospital-Wide Manual.

The first year of the Pediatric Pulmonary Fellowship is designed to provide a broad clinical experience. Integrated into this year will be orientation to the hospital and programs, and development of a research hypothesis with identification of a research mentor.

Following are the clinical and laboratory rotations for the **first year** clinical fellow in Pulmonology:

- Outpatient Service 1 month

- Inpatient Service 6 months
- Anesthesiology 1 month
- Respiratory Therapy 2 weeks
- Intensive Care Unit 1 month
- Pulmonary Function Lab 2 weeks
- Vacation 1 month
- Elective 1 month
- Continuity clinic: One half-day per week.

- Call: Average every third night and weekend; 2 holidays per year.

J. Clinical Curriculum for the Research Years of Fellowship

Following are the clinical responsibilities for the **second and third year** fellows:

- Continuity clinic:
 - Second year: One-half day per week
 - Third year: One-half day per week

- Call:
 - Second year: Night and weekend call remains identical
 - Third year: One month call free; eleven months identical as above

- Inpatient service: Third year fellows are asked to spend two months on the inpatient services. Senior fellows assume the role of a “junior attending” with full responsibility for the care of pulmonary patients, in addition to consultations. Attending back-up and supervision will be provided.

K. Core Curriculum

Competency Based Learning Goals and Objectives for Pulmonology Fellows

The overall goals and objectives for fellows are to gain extensive experience in the diagnosis and ongoing care of children with pulmonary diseases, and to become researchers and teachers in the field. First year fellows spend the majority of their time on inpatient and selected outpatient rotations. Second and third year fellows cover the inpatient services on call nights, weekends, and holidays, and participate in their weekly continuity clinics, while they spend the majority of their time devoted to research activities.

The goals listed below. have been established for the *first* year pediatric pulmonology fellows. These are primarily aimed at gaining experience in the daily management and continuity of care of children with known as well as presumptive pulmonary disorders. In general, the expectations of the first year fellow involve demonstration of medical knowledge, comprehension of

pathophysiology of disease, development of differential diagnoses, formulation of management plans, dissemination of plans by presentation at clinical conferences, and management of pulmonary patients in inpatient, outpatient, and consultative settings.

Senior fellows are expected to develop increased knowledge and independence with respect to the clinical care goals for the first year fellows. Additionally, the *second and third* year fellows are expected to develop a research project, get appropriate IRB approval and animal research approval as necessary, apply for grant funding as necessary, carry out necessary experiments or clinical studies, and prepare the results for presentation and publication. All fellows are also expected to engage in regular teaching activities for pediatric residents and medical students.

- a. **Goal: Patient Care** that is compassionate, appropriate, and effective for the treatment for the treatment of health programs and the promotion of health.
 - i. Demonstrate *thorough presentations* of patients seen as new patient consults, inpatient rounds, outpatient clinics, and at clinical conferences, and by *documentation* in the medical record the ability to report a detailed and appropriate history and physical examination, pertinent diagnostic studies, and develop rationale for the diagnostic and therapeutic decision making to optimize the care of children with pulmonary disease. Fellows must demonstrate the oversight of such a management plan and provide appropriate counsel to the patient and family for such diagnostic and management plans.
 - ii. Discriminate severity or changes in clinical status of patients which need to be reported to the attending immediately from those that can be presented on rounds. Discriminate between patients who may be appropriately treated on the inpatient unit and those who require escalation of care to the intensive care unit.
 - iii. Develop and provide rationale for the management plans of children with the following diseases or complications unique to Pediatric Pulmonology such as:
 - Congenital Abnormalities of the Upper Airway
 - Infections of the Upper Airway
 - Congenital Disorders of the Lower Airway
 - Asthma
 - Bronchiolitis
 - Cystic Fibrosis
 - Interstitial Lung Disease
 - Pneumonia
 - Disorders of the Chest Wall, Diaphragm, and Pleural Space
 - Acute Lung Disease in the Newborn Infant
 - Respiratory Failure
 - Aspiration/Inhalation Injuries
 - Bronchopulmonary Dysplasia

- Pulmonary Vascular Diseases in Childhood
 - Acute Respiratory Distress Syndrome (ARDS)
 - Pulmonary Manifestations of Immunosuppression
 - Control of Breathing Disorders
 - Intensive care of the newborn infant, including ventilatory care and advanced life support
 - Miscellaneous Lung Diseases
- iv. Recognize common complications, indications for and the risks of the following therapies, and develop appropriate management plans:
- Imaging
 - Laboratory diagnostic studies
 - Pharmacologic principles (basic pharmacology of frequently used medications for above disorders)
 - Chest physiotherapy
 - Aerosol therapy
 - Oxygen therapy
 - Mechanical ventilation (home and hospital)
 - Lung transplantation
 - Tracheostomy
 - Prevention
 - Smoking and smoking cessation
 - Nutritional support
 - Pain management
- v. Understand physiology and pathophysiology in the following areas:
- Lung growth and development
 - Structure and function of the respiratory system
 - Lung defense mechanisms
 - Cell biology and biochemistry
 - Gas exchange, ventilation-perfusion distribution, acid-base
 - Respiratory mechanics
 - Control of breathing
 - Pulmonary vascular physiology
 - Mechanics of lung inflammation, injury and repair
- vi. When requesting consultation, demonstrate the ability to formulate the appropriate questions and rationale justified by pertinent points of the history, physical examination, and laboratory data.
- vii. When requested to perform a consultation, demonstrate the ability to obtain the appropriate information to ascertain the urgency, perform a complete chart review and patient history, physical examination, review of pertinent laboratory data, and synthesize a cohesive summary, differential, and management plan. Demonstrate professionalism in the timeliness of the consult and personal demeanor in communicating with other health care staff and patients/families. Also include teaching residents and staff

- with verbal and written communication and review of the literature with appropriate materials referenced or provided.
- viii. Recognize the indications for, the common complications of, and achieve competence in performance of the procedures listed under procedural competencies.
- b. **Goal: Medical Knowledge** about the scope of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences as well as the application of this knowledge to patient care.
- i. Develop a prioritized differential diagnosis for children with pulmonary diseases hospitalized for acute illnesses, seen in the outpatient or continuity clinics, or during consultation.
 - ii. Fellows must demonstrate use of information technology to optimize patient care and education. Fellows should also become proficient at determining which laboratory tests are indicated and the appropriate interpretation. Supervision will be provided and it is expected that fellows will assume progressive responsibility with time and experience.
 - iii. Demonstrate knowledge of the pathophysiology of disease, review of recent advances in clinical medicine and biomedical research, dealing with complications and death, and the scientific, ethical, and legal implications of Informed Consent and confidentiality. Fellows are expected to become familiar with the pulmonary diseases listed in the Core Curriculum, section K. These diseases will frequently be encountered in the clinical setting and additionally reviewed formally by the fellows at the Fellows Conference.
 - iv. Take the SITE examination yearly and review the results by subsection for feedback on general academic knowledge base and areas needed for self-improvement.
 - v. Be an active participant in teaching and learning at the Fellows Conference, Journal Club, sign-out rounds, and clinical rounds. Fellows are expected to plan and implement the Fellows Conference and the Journal Club.
 - vi. Demonstrate a commitment to primary care responsibility with acquisition of a group of primary patients of varied pulmonary diagnoses, and continued involvement in the clinical management of these patients, on therapy and off to assess for complications of disease or therapies and provide appropriate interventional strategies. Remain the primary physician contact for the family and the remainder of the health care team, including the referring physician.
- c. **Goal: Practice Based Learning and Improvement** that involves the investigation and evaluation of the knowledge, skills, and attitudes needed for continuous self-assessment, using scientific principles, methods, and evidence to investigate, evaluate, and improve one's patient care practice.

- i. Present new cases and new problems with primary patients at clinical conferences with detailed literature review to support the chosen management plan.
 - ii. Critique one's practice experience to recognize strengths, deficiencies, and limits in knowledge and expertise; then identify and utilize the appropriate resources for remedying those identified deficiencies. Fellows will be asked to complete an assessment of their own clinical and research skills on a monthly basis in addition to evaluation of attendings. An evaluation of colleagues and peers occurs annually.
 - iii. Meet individually with the responsible attending physicians at least monthly during the clinical rotations to obtain feedback on performance. Meet with the continuity clinic attending/mentor at least monthly for this critique as well. Incorporate this feedback and that from the SOC for research performance to develop a professional development plan.
 - iv. Actively seek out and listen to constructive feedback from other members of the health care team as well as patients and families, and incorporate this feedback as appropriate into a professional, individual development plan.
 - v. Actively participate in the education of patients, families, Pediatric residents, medical students, and other health professionals by leading clinical rounds, providing daily direct updates on patient status and plan of care, and providing teaching points and scheduled didactics.
 - vi. Fellows will have the opportunity to teach and participate in continuing education activities as well as assume some departmental administrative responsibilities, such as QA and QI. Fellows will learn methods of adult learning for self-education and teaching purposes.
- d. **Goal: Interpersonal and Communication Skills** that result in effective information exchange and collaboration with patients, their families, and professional associates.
- i. Communicate effectively in a developmentally appropriate manner with patients, and their families, to create and sustain a professional and therapeutic relationship across a broad range of socioeconomic and cultural backgrounds.
 - ii. Lead discussions with the family of a child (and/or patient as age permits) with a newly diagnosed disease.
 - iii. Obtain Informed Consent for fellow performed procedures, and both research-based protocol therapy and non-research based therapies.
 - iv. Effectively communicate changes in patient status with all members of the health care team.
 - v. Maintain comprehensive, timely and legible medical records on inpatient and primary continuity patients.
 - vi. Communicate with attending physician (co-primary or on service attending) on a daily basis and with referral physicians on a

- periodic basis (new patients, discharge, change in status or plans, off therapy).
- vii. Provide timely written letters to referring physicians and consultations. Mentor should provide a structured review of such documentation and give feedback. Such feedback should be documented on the faculty evaluations of fellows.
 - viii. Assume the unique roles of team leader, team member, and consultant, as appropriate. Responsibility in these roles should increase with experience during the fellowship.
- e. **Goal: Professionalism** as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.
- i. Consistently maintain respect, compassion, integrity, honesty, and responsiveness to the needs of patients and the health care team in a way that supersedes self-interest.
 - ii. Attend educational programs geared towards Professionalism with respect to bioethics, professional relationships (with patients, family, health professionals), conflict of interest, medical error, etc.
 - iii. Continually demonstrate accountability to all patients and the health care team, including all physicians involved in the care.
 - iv. Demonstrate a commitment to excellence and ongoing professional development by being prepared, on time, in appropriate attire, polite, contributing to rounds without dominating, and participating/leading teaching conferences.
 - v. Exercise sensitivity to the needs of the patients and the family/guardians by applying cultural awareness, negotiation, compromise, and mutual respect in the care of the patients.
 - vi. Recognize and demonstrate an understanding of the ethical, cultural, religious or spiritual values of import of patients and families during communications and care decisions. Ensure all information is communicated in the patient/family's primary language.
 - vii. Demonstrate a commitment to confidentiality, privacy, and respect for patients and families.
 - viii. Demonstrate empathy towards the child and family in negotiating and designing goals of treatment, including relevant medical, legal, and psychological issues.
 - ix. Demonstrate advocacy for patients and families.
 - x. Honestly assess one's contribution to errors that are made, accept responsibility for personal mistakes, and implement plans to prevent one's self and others from making the same mistake.
 - xi. Demonstrate commitment to the fellowship program and pursue appropriate feedback in Fellows Education Sub-Committee and standard channels to effect changes that improve the program.

- xii. Demonstrate commitment to peers via support, guidance and positive mentoring to more junior fellows.
 - xiii. Learn to give criticism sensitively and accept criticism graciously.
- f. **Goal: Systems Based Practice** as manifested by actions that demonstrate an awareness of and responsiveness to the health care system and the ability to call upon resources to provide high quality health care and advocate for patients within the context of the health care system.
- i. Prioritize the various modes of diagnostic testing and select the most appropriate testing modality, with a goal toward preventing unnecessary laboratory or imaging studies.
 - ii. Demonstrate the ability to work effectively with other members of the health care team, including, but not limited to, other physicians, nurses, pharmacists, dieticians, interpreters, social workers, child life specialists, and chaplains. This includes effective working relationships during very stressful times for the patient and family such as at initial diagnosis and implementation of new therapy plans or surgical procedures, arranging home care or discharge, and making a pain management or end of life plans.
 - iii. Acknowledge medical errors in a forthright manner, and report observed medical errors (real or potential) to the appropriate member of the care team, then work with the team to develop a plan for preventing future errors. Participate in the Division Quality Improvement Committee(s) to draft policies and procedures and present the findings/outcomes in interdisciplinary meetings and conferences as well as provide in-service teaching to implement new methods.
 - iv. Comply with institutional systems that have been developed to prevent errors in the administration of “high-risk” medications.
 - v. Avoid use of ambiguous or unacceptable abbreviations in the medical record, prescriptions, and medical orders (See Resident Manual for full description).
 - vi. Participate in the departmental business meetings to gain knowledge and experience with regards to resource allocation, quality improvement, practice management, and current economics of health care.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Research Rotation – First Year			
Medical Knowledge	Brainstorm research ideas and meet with mentors to identify opportunities.	Meet with Director and any added research mentors to review clinical opportunities. Meet with Dr. Fischer to review basic science opportunities. Tour CHORI.	Director and research mentors will facilitate and assist with brainstorming ideas.

	Contribute to the body of knowledge of pediatric pulmonology by researching and writing up an interesting case.	Write up a case report and submit to a major meeting.	Director and research mentors will evaluate and provide constructive criticism.
	Begin to develop your area of research interest.	Develop a research hypothesis and design a study based on your hypothesis. Write an abstract.	Director and research mentors will facilitate and assist with brainstorming ideas.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Research Rotation – Second Year			
Medical Knowledge	Identify your area of research interest and a research question.	Develop a research hypothesis and design a study based on your hypothesis.	Director and research mentors will facilitate and assist with brainstorming ideas.
	Understand the process of clinical research from start to finish.	Attend fellow conference and learn the basic principles of statistics, review of medical literature, use of the internet for medical research, clinical research, IRB/informed consent, grant writing, sample size determination, manuscript preparation.	Fellow will obtain certificate of completion of Summer Clinical Research Workshop at UCSF.
Medical Knowledge and Patient Care	Understand and complete the processes of: development of a novel research project, applications for funding, IRB approval and informed consent, protocol completion, and analysis/ documentation of results.	Demonstrate competence in literature review of your chosen research topic, grant writing and submission, informed consent/IRB submission, obtaining consent from patients, completion of the protocol, documentation of results, writing up an abstract, and oral and written presentations.	Research mentors will evaluate fellow's understanding and performance, and correct/supplement as necessary.
Interpersonal and Communication Skills	Understand how to provide comprehensive and supportive pulmonary care to patients and families.	Demonstrate how to provide comprehensive and supportive care to patients during a clinical trial. Interface appropriately with the child and his/her parents, and coworkers.	Research mentors will evaluate fellow's performance, and correct/supplement as necessary.
Professionalism	Understand ethical principles of clinical	Demonstrate ethical and appropriate use of	Research mentors will evaluate fellow's

	research. Understand appropriate interactions with peers involved in research.	source materials. Demonstrate sensitivity in dealing with peers who are struggling with their own research endeavors.	understanding and performance, and correct/supplement as necessary.
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Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Research Rotation – Third Year			
Medical Knowledge	Identify your area of research interest and a research question.	Develop a research hypothesis and design a study based on your hypothesis.	Director and research mentors will facilitate and assist with brainstorming ideas.
	Understand the process of clinical research from start to finish.	Attend fellow conference and learn the basic principles of statistics, review of medical literature, use of the internet for medical research, clinical research, IRB/informed consent, grant writing, sample size determination, manuscript preparation.	Fellow will obtain certificate of completion of Summer Clinical Research Workshop at UCSF.
Medical Knowledge and Patient Care	Understand and complete the processes of: development of a novel research project, applications for funding, IRB approval and informed consent, protocol completion, and analysis/ documentation of results.	Demonstrate competence in literature review of your chosen research topic, grant writing and submission, informed consent/IRB submission, obtaining consent from patients, completion of the protocol, documentation of results, writing up an abstract, oral and written presentations of results, and submission of results for peer review.	Research mentors will evaluate fellow's understanding and performance, and correct/supplement as necessary.
Interpersonal and Communication Skills	Understand how to provide comprehensive and supportive pulmonary care to patients and families.	Demonstrate how to provide comprehensive and supportive care to patients during a clinical trial. Interface appropriately with the child and his/her parents, and coworkers.	Research mentors will evaluate fellow's performance, and correct/supplement as necessary.
Professionalism	Understand ethical principles of clinical research. Understand appropriate interactions with peers involved in	Demonstrate ethical and appropriate use of source materials. Demonstrate sensitivity in dealing with peers	Research mentors will evaluate fellow's understanding and performance, and correct/supplement as

	research.	who are struggling with their own research endeavors.	necessary.
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Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Respiratory Therapy Rotation			
Interpersonal and Communication Skills	Interface appropriately with child and his/her parents.	Communicate indications and directions for use of oxygen, incentive spirometry, cough assist device, VEST, chest PT, PEP, IPV, acapella, flutter, NIPPV, negative PV, and PPV with patient and family.	RT and attendings will evaluate fellow's understanding and correct/supplement as necessary.
Medical Knowledge	Understand AARC guidelines for oxygen use, ACT, asthma devices, NIV and PPV.	Discuss AARC guidelines with the respiratory therapist.	RT and attendings will evaluate fellow's understanding and correct/supplement as necessary.
	Understand appropriate treatments for different clinical conditions.	Identify signs/symptoms of hypoxemia, poor inspiratory function, poor expiratory function, weak cough, poor secretion clearance, sleep hypoventilation, respiratory failure. Determine effective supportive therapies for the above conditions.	RT and attendings will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Understand how to set up, monitor, and troubleshoot respiratory equipment.	Demonstrate competence in setting up and using a tank of oxygen, nasal cannula, simple mask, non-rebreather mask. Demonstrate skill in use of pulmonary mechanics monitors with PPV. Troubleshoot alarms and vent failure.	RT and attendings will evaluate fellow's understanding and correct/supplement as necessary.
	Learn coaching skills to help patients effectively use equipment.	Demonstrate coaching skills for incentive spirometry, and ACT supports.	RT and attendings will evaluate fellow's understanding and correct/supplement as necessary.
Practice-Based Learning and Improvement	Become a life-long learner.	Demonstrate progressive learning throughout the rotation with emphasis on learning from any cognitive or procedural	RT and attendings will evaluate fellow's progress throughout the rotation and

		errors.	
Professionalism	Interface appropriately with child and his/her parents.	Demonstrate sensitivity in dealing with severely disabled patients and their families. Demonstrate respect, compassion and integrity. Demonstrate a commitment to ethical principles pertaining to provision on withholding of clinical care, confidentiality of patient information, and informed consent. Understand how to provide comprehensive and supportive care to patients with abnormal lung function.	RT and attendings will evaluate fellow's understanding and correct/supplement as necessary.
System-Based Practices	Learn systematic strategies to improve care for patients and families.	Work effectively with technicians. Advocate for quality patient care and assist patients in dealing with system complexities. Facilitate ongoing quality improvement initiatives.	RT and attendings will evaluate fellow's understanding and correct/supplement as necessary.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Pulmonary Function Rotation			
Interpersonal and Communication Skills	Interface appropriately with child and his/her parents.	Communicate indications for testing of obstructive diseases and sleep disturbances to patient and family.	PF tech will evaluate fellow's understanding and correct/supplement as necessary.
Medical Knowledge	Understand the ATS guidelines for PFT, guidelines for sleep studies, and basic use of IPFT.	Work with PF techs in performance of various pulmonary function tests.	PF tech will evaluate fellow's understanding and correct/supplement as necessary.
	Understand appropriate testing for different clinical conditions.	Determine appropriate testing for different clinical conditions during patient encounters.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand clinical presentations of obstructive and restrictive lung disease, and sleep disturbances.	Identify signs/symptoms of obstructive lung disease, restrictive lung disease, and sleep disturbances.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Understand how to perform pulmonary	Demonstrate competence in FVL	PF tech will evaluate fellow's understanding

	function testing, and how to provide comprehensive and supportive care to patients with abnormal lung function.	testing, coaching skill for spirometry, plethysmography, diffusion, exercise testing, and infant testing.	and correct/supplement as necessary.
Practice-Based Learning and Improvement	Develop a system for continued self-improvement.	Understand limitations of knowledge and judgement and ask for help when needed. Accept feedback, learn from one's errors and develop self-improvement plans.	PF tech will evaluate fellow's understanding and correct/supplement as necessary.
	Become a life-long learner.	Use information technology to manage information and access online medical information.	PF tech will evaluate fellow's understanding and correct/supplement as necessary.
Professionalism	Interface appropriately with child and his/her parents.	Demonstrate sensitivity in dealing with severely disabled patients and their families. Demonstrate respect, compassion and integrity. Demonstrate a commitment to ethical principles pertaining to provision or withholding clinical care, confidentiality of patient information, and informed consent.	PF tech will evaluate fellow's understanding and correct/supplement as necessary.
System-Based Practices	Learn systematic strategies to improve care for patients and families.	Work effectively with technicians. Advocate for quality patient care and assist patients in dealing with system complexities. Understand the importance of contacting the patient's primary care provider when the patient has an abnormal study.	PF tech will evaluate fellow's understanding and correct/supplement as necessary.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
PICU Rotation			
Interpersonal and Communication Skills	Maintain comprehensive, timely and accurate medical records.	Write thorough and complete admission H&P's and daily progress notes for weekend call. Contact PMD's to update them	PICU attending will evaluate fellow's understanding and correct/supplement as necessary.

		on plan of care.	
Medical Knowledge	Understand physiologic monitoring, special technology and treatment in the PICIU setting.	Explain the application of physiologic monitoring and special technology and treatment in the PICU setting.	PICU attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand how to evaluate and manage different presentations of critically ill children.	Evaluate and manage common signs and symptoms seen in critically ill children and accurately assess when to transfer to an intensive care setting. Demonstrate the ability to manage certain diagnoses (as a generalist) commonly encountered in the PICU setting, as well as indications for transfer to a tertiary or quaternary care setting.	PICU attending will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Understand how to resuscitate and stabilize critically ill children.	Demonstrate the ability to resuscitate and stabilize the critically ill child.	PICU attending will evaluate fellow's understanding and correct/supplement as necessary.
Practice-Based Learning and Improvement	Improve teaching skills.	Actively participate in teaching residents in daily rounds.	PICU attending will evaluate fellow's understanding and correct/supplement as necessary.
Professionalism	Understand how to provide comprehensive and supportive care to PICU patients and families.	Discuss ethical and medicolegal considerations in the care of critically ill children.	PICU attending will evaluate fellow's understanding and correct/supplement as necessary.
System-Based Practices	Understand how to manage complex patients with multiple problems.	Demonstrate case management skills for complex multi-problem patients under high stress situations, under the supervision of an intensivist, using principles of decision-making, problem-solving and understanding one's own limits.	PICU attending will evaluate fellow's understanding and correct/supplement as necessary.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Anesthesia Rotation			
Interpersonal and	Interface appropriately	Explain the application	Anesthesia attending

Communication Skills	with child and his/her parents.	of physiologic monitoring and special technology and treatment in the OR setting to patients and their family members.	will evaluate fellow's understanding and correct/supplement as necessary.
Medical Knowledge	Understand use of common anesthetic agents.	Explain the pharmacology of common anesthetic agents, risks and benefits, and dosing.	Anesthesia attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand decision-making for level of airway support required for different patients.	Demonstrates understanding of when intubation versus mask forms of anesthesia are appropriate.	Anesthesia attending will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Achieve competency with laryngoscopy and intubation.	Demonstrate ability to perform laryngoscopy and intubation of infants and children.	Anesthesia attending will evaluate fellow's performance and correct/supplement as necessary.
	Understand rapid sequence induction.	Demonstrate ability to assist for rapid induction.	Anesthesia attending will evaluate fellow's understanding and performance and correct/supplement as necessary.
	Achieve competency with IV placement.	Demonstrate ability to place IV catheters in infants and children.	Anesthesia attending will evaluate fellow's performance and correct/supplement as necessary.
Practice-Based Learning and Improvement	Work with technology to improve learning.	Practice virtual laryngoscopy and bronchoscopy evaluation.	Anesthesia attending will evaluate fellow's understanding and correct/supplement as necessary.
Professionalism	Interface appropriately with child and his/her parents.	Demonstrate appropriateness in speaking with anxious families before taking their loved one to the OR.	Anesthesia attending will evaluate fellow's performance and correct/supplement as necessary.
System-Based Practices	Learn strategies to identify system-based problems and develop practical solutions.	Work effectively between pulmonary and OR staff in various health care delivery systems.	Anesthesia attending will evaluate fellow's performance and correct/supplement as necessary.

L. Continuity Clinic

- See Hospital-Wide Manual.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
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Outpatient Rotation – First Year			
Interpersonal and Communication Skills	Understand the basic design of the EMR.	Use Word and Meditech, cut and paste, prepare reports for cosigning, E-sign in Meditech	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand professionalism and communication basics expected by attendings.	Demonstrate this understanding in all patient encounters.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand how to provide comprehensive and supportive care to pulmonary patients and families.	Interface appropriately with established plans of care for chronically ill children. Demonstrate respect, sensitivity, and skill in dealing with the child, family and other health care professionals. Recognize the limits of one's knowledge, skills, and tolerance for stress by asking for help as needed. Determine when family conferences are needed and arrange.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
Medical Knowledge	Understand the application of physiologic monitoring and special technology and treatment in the outpatient setting.	Discuss indications for and the interpretation of hemoglobin saturation.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand application, performance and teaching of clinic tests and management devices.	Demonstrate understanding of ACT devices, asthma tools, compressors and nebulizers. Begin spirometric coaching and performance with patients.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Develop case management skills for handling pharmacy requests and medical advice.	Work with Nurse Case Manager to understand computer system for case management skills above. Demonstrate these skills for Nurse Case Manager.	Nurse Case Manager will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Learn how to manage certain diagnoses (as a pulmonologist) encountered in the clinic setting. Present H&P to attending in 10-15	Discuss the pathophysiology, admission/discharge criteria, stabilization/work-up, management, prognosis	Attending will evaluate fellow's understanding and correct/supplement as necessary.

	minutes.	including sequelae, and complications of each of the following conditions: Foreign body aspiration, obstructive sleep apnea, congenital anomalies, upper airway obstruction, bronchiolitis, pneumonia, pneumothorax, status asthmaticus, CF, CF with DIOS, CFRDM, CF hemoptysis, ILD, central hypoventilation syndrome, chronic cough, NMD-Bellows dysfunction, BPD, Trach, NIV, hemoptysis.	
Practice-Based Learning and Improvement		Select a pulmonary topic of need and teach a class to office staff on skills and basics learned as a fellow.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
Professionalism	Develop case management skills for complex pulmonary patients, under the supervision of a pulmonologist, using principles of decision-making, problem-solving, and understanding one's own limits.	Develop/maintain detailed problem lists with accurate prioritization.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
System-Based Practices	Understand the basic design of the Evaluation and Management national billing system.	Discuss concepts of history, physical exam, supplemental data, decision-making and case complexity, and final code determination.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Become familiar with system for dealing with patients who no-show for a visit or who are late for a visit.	Develop a plan for dealing with late patients. Complete no-show letters to document missed visits.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Demonstrate competency using E and M guidelines to complete BAPP encounter form for every patient seen.	Complete encounter form and review with attending.	Attending will explain E and M guidelines, and review each step with the fellow.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Outpatient Rotation – Second Year			
Interpersonal and Communication Skills	Understand the basic design of the EMR.	Use Word and Meditech, cut and paste, prepare reports for cosigning, E-sign in Meditech	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand professionalism and communication basics expected by attendings.	Demonstrate this understanding in all patient encounters.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand how to provide comprehensive and supportive care to pulmonary patients and families.	Interface appropriately with established plans of care for chronically ill children. Demonstrate respect, sensitivity, and skill in dealing with the child, family and other health care professionals. Recognize the limits of one's knowledge, skills, and tolerance for stress by asking for help as needed. Determine need, arrange and begin to lead family conferences with attending assistance.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
Medical Knowledge	Understand the application of physiologic monitoring and special technology and treatment in the outpatient setting.	Discuss indications for and the interpretation of hemoglobin saturation.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand application, performance and teaching of clinic tests and management devices.	Demonstrate understanding of FVL, ACT devices, asthma tools, compressors and nebulizers. Perform spirometric coaching for patients.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Develop case management skills for handling pharmacy requests and medical advice.	Work with Nurse Case Manager to understand computer system for case management skills above. Demonstrate these skills for Nurse Case Manager.	Nurse Case Manager will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Learn how to manage certain diagnoses (as a pulmonologist) encountered in the clinic	Discuss the pathophysiology, admission/discharge criteria,	Attending will evaluate fellow's understanding and correct/supplement as necessary.

	setting. Present H&P to attending in 10-15 minutes.	stabilization/work-up, management, prognosis including sequelae, and complications of each of the following conditions: Foreign body aspiration, obstructive sleep apnea, congenital anomalies, upper airway obstruction, bronchiolitis, pneumonia, pneumothorax, status asthmaticus, CF, CF with DIOS, CFRDM, CF hemoptysis, ILD, central hypoventilation syndrome, chronic cough, NMD-Bellows dysfunction, BPD, Trach, NIV, hemoptysis.	
Practice-Based Learning and Improvement		Select a pulmonary topic of need and teach a class to office staff on skills and basics learned as a fellow.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
Professionalism	Develop case management skills for complex pulmonary patients, under the supervision of a pulmonologist, using principles of decision-making, problem-solving, and understanding one's own limits.	Develop/maintain detailed problem lists with accurate prioritization. Coordinate patients with multiple consultants involved in the care of the patient. Coordinate home oxygen, CPAP, BiPAP, tracheostomy, home ventilation.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
System-Based Practices	Understand the basic design of the Evaluation and Management national billing system.	Discuss concepts of history, physical exam, supplemental data, decision-making and case complexity, and final code determination.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Become familiar with system for dealing with patients who no-show for a visit or who are late for a visit.	Develop a plan for dealing with late patients. Complete no-show letters to document missed visits.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Demonstrate competency using E and M guidelines to complete BAPP encounter form for every patient seen.	Complete encounter form and review with attending.	Attending will randomly assess full information leading to code determination if errors discovered.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Outpatient Rotation – Third Year			
Interpersonal and Communication Skills	Understand the basic design of the EMR.	Use Word and Meditech, cut and paste, prepare reports for cosigning, E-sign in Meditech	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand professionalism and communication basics expected by attendings.	Demonstrate this understanding in all patient encounters.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand how to provide comprehensive and supportive care to pulmonary patients and families.	Interface appropriately with established plans of care for chronically ill children. Demonstrate respect, sensitivity, and skill in dealing with the child, family and other health care professionals. Recognize the limits of one's knowledge, skills, and tolerance for stress by asking for help as needed. Determine when family conferences are needed and arrange.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
Medical Knowledge	Understand the application of physiologic monitoring and special technology and treatment in the outpatient setting.	Discuss indications for and the interpretation of hemoglobin saturation.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Understand application, performance and teaching of clinic tests and management devices.	Demonstrate understanding of ACT devices, asthma tools, compressors and nebulizers. Begin spirometric coaching and performance with patients.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Develop case management skills for handling pharmacy requests and medical advice.	Demonstrate these skills for the group.	Nurse Case Manager and attending will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Learn how to manage certain diagnoses (as a pulmonologist) encountered in the clinic	Discuss the pathophysiology, admission/discharge criteria,	Attending will evaluate fellow's understanding and correct/supplement as necessary.

	setting. Present H&P to attending in 10-15 minutes.	stabilization/work-up, management, prognosis including sequelae, and complications of each of the following conditions: Foreign body aspiration, obstructive sleep apnea, congenital anomalies, upper airway obstruction, bronchiolitis, pneumonia, pneumothorax, status asthmaticus, CF, CF with DIOS, CFRDM, CF hemoptysis, ILD, central hypoventilation syndrome, chronic cough, NMD-Bellows dysfunction, BPD, Trach, NIV, hemoptysis.	
Practice-Based Learning and Improvement		Select a pulmonary topic of need and teach a class to office staff on skills and basics learned as a fellow.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Develop case management skills for complex pulmonary patients, under the supervision of a pulmonologist, using principles of decision-making, problem-solving, and understanding one's own limits.	Develop/maintain detailed problem lists with accurate prioritization.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
System-Based Practices	Understand the basic design of the Evaluation and Management national billing system.	Discuss concepts of history, physical exam, supplemental data, decision-making and case complexity, and final code determination.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Become familiar with system for dealing with patients who no-show for a visit or who are late for a visit.	Develop a plan for dealing with late patients. Complete no-show letters to document missed visits.	Attending will evaluate fellow's understanding and correct/supplement as necessary.
	Demonstrate competency using E and M guidelines to complete BAPP encounter form for every patient seen.	Complete encounter form and review with attending.	Attending randomly perform electronic review of coding and discuss errors with fellow.

M. Clinical Objectives and Responsibilities on the Inpatient Services

- See Hospital-Wide Manual.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Inpatient Rotation – First Year			
Interpersonal and Communication Skills	Teach resident and colleagues about pulmonary diagnoses.	Prepare and review cases with residents on pulmonary service. Give a continuity clinic conference.	Residents and colleagues will submit evaluations of teaching conferences.
	Understand how to provide comprehensive and supportive pulmonary care to patients and families.	Interface appropriately with established plans of care for chronically ill children. Demonstrate respect, sensitivity and skill in dealing with death and dying with the child, family, and other health care professionals. Recognize the limits of one's knowledge, skills, and tolerance for stress by asking for help as needed. Recognize need for patient care conferences and assist in scheduling and attending the conferences.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
Medical knowledge	Understand the application of physiologic monitoring and special technology and treatment in the hospital setting.	Discuss indications for and interpretation of CR monitoring and oximetry. Discuss the appropriate use of, techniques for monitoring and potential complications of: chronic ventilator management, non-invasive ventilation, and O2 administration (cannula, hood, mask, positive pressure ventilation)	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Learn how to manage pulmonary diagnoses commonly encountered in the hospital setting.	Discuss pathophysiology, admission/discharge criteria, stabilization/work-up, management and prognosis including	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.

		sequelae and complications of: Foreign body aspiration, obstructive sleep apnea, post-op ENT management, structural anomalies, upper airway obstruction, ARDS, bronchiolitis, pneumonia, respiratory failure, status asthmaticus, CF, CF with DIOS, chronic cough, BPD, trach, NIV.	
	Learn how to resuscitate and stabilize the critically ill child in the ward setting.	Explain and perform steps in resuscitation and stabilization with attention to airway management and resuscitative pharmacology. Describe the common causes of acute deterioration in the previously stable ward patient. Function appropriately in codes and resuscitations. Complete PICU rotation.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Learn how to evaluate and manage common signs and symptoms seen in chronically ill children, including when to transfer to an intensive care setting.	Identify signs and symptoms, discuss pathophysiology, differential diagnosis, and indications for intervention for each of the following conditions: Apnea, cyanosis, dyspnea, increased/decreased respiratory effort, pulmonary edema, stridor, wheezing.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
Practice-Based Learning and Improvement	Demonstrate competency using E and M guidelines to complete BAPP encounter form for each patient seen.	Determine coding and billing for each patient encounter.	Attending on service will evaluate fellow's bills and correct/supplement as necessary.
	Demonstrate competency with bronchoscopy.	Assist as "tech" for bronchoscopies. Attend bronchoscopy course. Pass virtual bronchoscopy performance with attending. Begin	Obtain CME certificate of completion from bronchoscopy course. Attending on service will evaluate fellow's skills and correct/supplement as

		bronchoscopy on patients.	necessary.
Professionalism	Demonstrate acceptable personal demeanor and hygiene.	Wear appropriate professional attire. Avoid scents or perfumes.	Attending on service will evaluate.
	Become familiar with ethical and medical-legal considerations in the care of chronically ill children.	Discuss concepts of futility, withdrawal, and withholding of care. Describe hospital policy on "Do Not Resuscitate/Allow Natural Death" orders. Describe the indications for ethics committee consultation.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Type 45-50wpm with 90% accuracy.	Take typing test and continue to practice as necessary. See patient and complete documentation within duty hours.	Attending on service will evaluate fellow's efficiency and assist with strategies to improve as necessary.
System-Based Practices	Understand the basic design of the Evaluation and Management national billing system.	Discuss concepts of history, physical exam, supplemental data, decision-making and case complexity, and final code determination.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Develop case management skills for complex pulmonary patients under the supervision of a pulmonologist, using principles of decision-making and problem-solving, and understanding one's own limits.	Develop/maintain detailed problem lists with accurate prioritization. Handle phone triage, prescription refills, lab triage. Learn bronchoscopy skills.	Attending on service will provide support and assistance as required for case management skills.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Inpatient Rotation – Second Year			
Interpersonal and Communication Skills	Improve teaching skills.	Prepare and review cases with residents on pulmonary service. Give a continuity clinic conference. Participate in teaching skills workshop.	Residents and colleagues will submit evaluations of teaching conferences.
	Understand how to provide comprehensive and supportive	Interface appropriately with established plans of care for chronically ill	Attending on service will evaluate fellow's understanding and

	pulmonary care to patients and families.	children. Demonstrate respect, sensitivity and skill in dealing with death and dying with the child, family, and other health care professionals. Recognize the limits of one's knowledge, skills, and tolerance for stress by asking for help as needed. Recognize need for patient care conferences and assist in scheduling the conferences. Start to lead portions of patient care conferences with assistance from the attending.	correct/supplement as necessary.
Medical knowledge	Understand the application of physiologic monitoring and special technology and treatment in the hospital setting.	Discuss indications for and interpretation of CR monitoring and oximetry. Discuss the appropriate use of, techniques for monitoring and potential complications of: chronic ventilator management, non-invasive ventilation, and O2 administration (cannula, hood, mask, positive pressure ventilation)	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Learn how to manage pulmonary diagnoses commonly encountered in the hospital setting.	Discuss pathophysiology, admission/discharge criteria, stabilization/work-up, management and prognosis including sequelae and complications of: submersion injury, foreign body aspiration, obstructive sleep apnea, post-op ENT management, structural anomalies, upper airway obstruction, acute chest syndrome, ARDS, bronchiolitis, pneumonia, pneumothorax, respiratory failure, status	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.

		asthmaticus, CF, CF with DIOS, CFRDM, ILD, chronic cough, central hypoventilation, BPD, trach, NIV, hemoptysis.	
	Learn how to resuscitate and stabilize the critically ill child in the ward setting.	Explain and perform steps in resuscitation and stabilization with attention to airway management and resuscitative pharmacology. Describe the common causes of acute deterioration in the previously stable ward patient. Function appropriately in codes and resuscitations. Lead code efforts if code team unavailable and need arises.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Learn how to evaluate and manage common signs and symptoms seen in chronically ill children, including when to transfer to an intensive care setting.	Identify signs and symptoms, discuss pathophysiology, differential diagnosis, and indications for intervention for each of the following conditions: Apnea, cyanosis, dyspnea, increased/decreased respiratory effort, pulmonary edema, stridor, wheezing.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
Practice-Based Learning and Improvement	Demonstrate competency using E and M guidelines to complete BAPP encounter form for each patient seen.	Determine coding and billing for each patient encounter.	Attending on service will evaluate random sample of fellow's bills and correct/supplement as necessary.
	Demonstrate proficiency with bronchoscopy.	Perform flexible bronchoscopy, bronchoalveolar lavage, and flexible laryngoscopy. Call attending for assistance when patient arrives and equipment set up.	Attending on service will evaluate fellow's skills and correct/supplement as necessary.
Professionalism	Demonstrate acceptable personal demeanor and hygiene.	Wear appropriate professional attire. Avoid scents or perfumes.	Attending on service will evaluate.
	Become familiar with ethical and medical-	Discuss concepts of futility, withdrawal, and	Attending on service will evaluate fellow's

	legal considerations in the care of chronically ill children.	withholding of care. Describe criteria for lung transplantation. Describe hospital policy on “Do Not Resuscitate/Allow Natural Death” orders. Describe the indications for ethics committee consultation.	understanding and correct/supplement as necessary.
	Type 45-50wpm with 90% accuracy.	Take typing test and continue to practice as necessary. See patient and complete documentation within duty hours.	Attending on service will evaluate fellow’s efficiency and assist with strategies to improve as necessary.
System-Based Practices	Understand the basic design of the Evaluation and Management national billing system.	Discuss concepts of history, physical exam, supplemental data, decision-making and case complexity, and final code determination.	Attending on service will evaluate fellow’s understanding and correct/supplement as necessary.
	Develop case management skills for complex pulmonary patients under the supervision of a pulmonologist, using principles of decision-making and problem-solving, and understanding one’s own limits.	Develop/maintain detailed problem lists with accurate prioritization. Handle phone triage, prescription refills, lab triage. Coordinate CPAP or BiPAP, tracheostomy care, home ventilation.	Attending on service will provide support and assistance as required for case management skills.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Inpatient Rotation – Third Year			
Interpersonal and Communication Skills	Improve teaching skills.	Prepare and review cases with residents on pulmonary service. Give a continuity clinic conference.	Residents and colleagues will submit evaluations of teaching conferences.
	Understand how to provide comprehensive and supportive pulmonary care to patients and families.	Interface appropriately with established plans of care for chronically ill children. Demonstrate respect, sensitivity and skill in dealing with death and dying with the child, family, and other health care professionals. Recognize the limits of	Attending on service will evaluate fellow’s understanding and correct/supplement as necessary.

		<p>one's knowledge, skills, and tolerance for stress by asking for help as needed.</p> <p>Recognize need for patient care conferences and assist in scheduling the conferences. Lead parent conferences with minimal attending support, but attending will be present.</p>	
Medical knowledge	Understand the application of physiologic monitoring and special technology and treatment in the hospital setting.	<p>Discuss indications for and interpretation of CR monitoring and oximetry.</p> <p>Discuss the appropriate use of, techniques for monitoring and potential complications of: chronic ventilator management, non-invasive ventilation, and O2 administration (cannula, hood, mask, positive pressure ventilation)</p>	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Learn how to manage pulmonary diagnoses commonly encountered in the hospital setting.	<p>Discuss pathophysiology, admission/discharge criteria, stabilization/work-up, management and prognosis including sequelae and complications of: submersion injury, thermal airway injury, foreign body aspiration, obstructive sleep apnea, post-op ENT management, structural anomalies, upper airway obstruction, acute chest syndrome, ARDS, bronchiolitis, pneumonia, pneumothorax, respiratory failure, status asthmaticus, CF, CF with DIOS, CFRDM, CF hemoptysis, ILD, chronic cough, central hypoventilation, NMD-Bellows dysfunction, BPD, trach, NIV,</p>	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.

		hemoptysis, lung transplant.	
	Learn how to resuscitate and stabilize the critically ill child in the ward setting.	Explain and perform steps in resuscitation and stabilization with attention to airway management and resuscitative pharmacology. Describe the common causes of acute deterioration in the previously stable ward patient. Function appropriately in codes and resuscitations. Lead code efforts if need arises. Direct code team or hand off as appropriate.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
	Learn how to evaluate and manage common signs and symptoms seen in chronically ill children, including when to transfer to an intensive care setting.	Identify signs and symptoms, discuss pathophysiology, differential diagnosis, and indications for intervention for each of the following conditions: Apnea, cyanosis, dyspnea, increased/decreased respiratory effort, pulmonary edema, stridor, wheezing. Initiate transfers as appropriate and inform attending.	Attending on service will evaluate fellow's understanding and correct/supplement as necessary.
Practice-Based Learning and Improvement	Demonstrate competency using E and M guidelines to complete BAPP encounter form for each patient seen.	Determine coding and billing for each patient encounter.	Attending on service will evaluate random sample of fellow's bills and correct/supplement as necessary.
	Demonstrate proficiency with bronchoscopy.	Perform flexible bronchoscopy, bronchoalveolar lavage, and flexible laryngoscopy. Call attending when patient arrives in the OR.	Attending on service will evaluate fellow's skills and correct/supplement as necessary.
Professionalism	Demonstrate acceptable personal demeanor and hygiene.	Wear appropriate professional attire. Avoid scents or perfumes.	Attending on service will evaluate.
	Become familiar with ethical and medical-legal considerations in	Discuss concepts of futility, withdrawal, and withholding of care.	Attending on service will evaluate fellow's understanding and

	the care of chronically ill children.	Describe criteria for lung transplantation. Describe hospital policy on “Do Not Resuscitate/Allow Natural Death” orders. Describe the indications for ethics committee consultation.	correct/supplement as necessary.
	Type 45-50wpm with 90% accuracy.	Take typing test and continue to practice as necessary. See patient and complete documentation within duty hours.	Attending on service will evaluate fellow’s efficiency and assist with strategies to improve as necessary.
System-Based Practices	Understand the basic design of the Evaluation and Management national billing system.	Discuss concepts of history, physical exam, supplemental data, decision-making and case complexity, and final code determination.	Attending on service will evaluate fellow’s understanding and correct/supplement as necessary.
	Develop case management skills for complex pulmonary patients under the supervision of a pulmonologist, using principles of decision-making and problem-solving, and understanding one’s own limits.	Develop/maintain detailed problem lists with accurate prioritization. Handle phone triage, prescription refills, lab triage. Coordinate CPAP or BiPAP, tracheostomy care, home ventilation.	Attending on service will provide support and assistance as required for case management skills.

N. Night/Weekend/Holiday Call and Sign-out

OPTIONAL WORDING – USE AS APPROPRIATE: Call responsibilities remain the same for all fellows, all three years. Fellows take call from home, however, they may on occasion need to come to the hospital to evaluate patients experiencing complications of their disease or treatment of patients with _____. Each fellow assumes a maximum of _____ call. An attending is always available for back-up and should be called for difficult questions, newly diagnosed patients, critically ill patients warranting admission or transfer to the ICU, and deaths. Fellows are expected to call the attending and come into the hospital to evaluate ICU patients and newly diagnosed _____ patients or to admit patients. Also, any patient, in the judgement of the fellow or attending, that may require a timely assessment should be seen right away and not wait to the next morning.

Fellows are asked to keep a log of their calls, patient names, diagnoses, reason for call, and recommendations. During the weekday, patients are

signed out in a _____ form to the entire clinical department in the morning so as to allow quick follow-up by the nurse practitioners or attending staff. Fellows must also document time spent actually taking the calls and time spent in the hospital. Any unusual circumstances that may warrant immediate attention such as admissions, new patients, and critically ill patients, should also be communicated verbally to the responsible fellow and attending.

Weekend sign-out rounds occur in person on Monday mornings. The on-call fellow (and attendings) give a verbal presentation of all admissions in addition to the current diagnostic and management issues on all hospitalized patients, including consultations. The calls and discharges are signed out in a _____ form as per the weekday protocol. All fellows, attending physicians, _____ are *expected* to attend. This also provides an opportunity for discussion of patient management and updates on the status of primary patients.

O. Teaching Responsibilities

See Hospital-Wide Manual.

P. Supervisory Lines of Responsibility

See Hospital-Wide Manual.

Q. Clinical Objectives for the Elective Rotations

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
Radiology Rotation			
Interpersonal and Communication Skills	Function as an integral member of the health care team.	Communicate effectively with members of the health care team. Observe informed consent discussions led by the radiologist. Recognize and communicate urgent or unexpected radiologic findings. Effectively teach residents, medical students and other health care professionals.	Radiology attending will evaluate fellow's understanding and performance and correct/supplement as necessary.
Medical knowledge	Understand indications for radiologic testing, and identify common radiologic abnormalities.	Recognize and describe relevant radiologic abnormalities. Synthesize radiologic and clinical information and form an impression.	Radiology attending will evaluate fellow's understanding and correct/supplement as necessary.
Patient care	Understand how radiologic findings	Develop a management plan based on radiologic	Radiology attending will evaluate fellow's

	contribute to decision-making for different pulmonary diseases.	findings and clinical information. Demonstrate proper technique in planning and performing image-guided procedures.	understanding and correct/supplement as necessary.
Practice-Based Learning and Improvement	Understand how to integrate information technology into the process of ongoing learning and clinical care.	Utilize information technology for continuous self-learning and to investigate clinical questions. Participate in QI/QA activities. Recognize and correct personal errors.	Radiology attending will evaluate fellow's understanding and performance and correct/supplement as necessary.
Professionalism	Act as a responsible member of the health care team.	Demonstrate responsible work ethic with regard to conference attendance and work assignments. Demonstrate acceptable personal demeanor and hygiene.	Radiology attending will evaluate and correct as necessary.
System-Based Practices	Understand principles of cost-efficacy in health care.	Demonstrate knowledge of cost-effective health care principles with regard to professional practice.	Radiology attending will evaluate fellow's understanding and correct/supplement as necessary.

Rotation and Aspect of Training	Objectives	Implementation	Evaluation
ENT Rotation			
Interpersonal and Communication Skills	Understand the importance of interdisciplinary communication.	Communicate effectively between the ENT and Pulmonary services.	ENT attending will evaluate fellow's understanding and correct/supplement as necessary.
Medical Knowledge	Understand rationale for surgical vs. medical interventions for upper airway pathology.	Discuss differential diagnosis, indications for surgical and medical interventions, and management plans for upper airway pathology.	ENT attending will evaluate fellow's understanding and correct/supplement as necessary.
Patient Care	Acquire basic knowledge of surgical skills for the upper airway.	Observe cases in the OR performed by ENT attending and assist as appropriate.	ENT attending will evaluate fellow's understanding and correct/supplement as necessary.
Practice-Based Learning and Improvement	Acquire skills of lifelong learning.	Determine fellow's areas of weakness and focus on amending deficiencies via scholarly readings.	ENT attending will evaluate fellow's understanding and correct/supplement as necessary.
Professionalism	Understand different approaches among medical and surgical	Observe and learn how surgeons approach discussing care options	ENT attending will evaluate fellow's understanding and

	team members to patient and family interactions.	with families.	correct/supplement as necessary.
System-Based Practices	Learn strategies to identify system-based problems and develop practical solutions.	Identify system issue between pulmonology and ENT and work to improve the system.	ENT attending will evaluate fellow's understanding and correct/supplement as necessary.

4. Research Competence/Scholarship Oversight Committee

A. Research Funding

See Hospital-Wide Manual.

B. Research Core Curriculum

See Hospital-Wide Manual.

C. Scholarly Activities

See Hospital-Wide Manual.

D. Work Product of Scholarly Activity

See Hospital-Wide Manual.

E. Duties of the Scholarship Oversight Committee (SOC)

See Hospital-Wide Manual.

F. Guidelines for Fellow Presentations to the Scholarship Oversight Committee

See Hospital-Wide Manual.

G. SOC Evaluation Process

See Hospital-Wide Manual.

H. Final Presentation

See Hospital-Wide Manual.