Goals of the Airway /Otorhinolaryngology Anesthesiology Fellowship Program at Montefiore Medical Center/Einstein College of Medicine

At the completion of the fellowship program, the graduates will

- Function as competent comprehensive anesthesia consultants in the pre-anesthesia evaluation and preparation, and intra- and post-operative management of routine and complex airway management patients, specifically in the services of Bariatric, Oromaxillofacial, Otorhinolaryngology, Thoracic, Pediatric Airway, Interventional Pulmonology, and Sleep Medicine
- Provide patient care that is compassionate, appropriate and effective
- Demonstrate technical proficiency in the skills listed:
 - Routine Airway management skills
 - Complex Airway management skills
 - Function within the guidelines of difficult airway management authored by the American Society of Anesthesiology (ASA)
 - o Perform diagnostic flexible bronchoscopy
 - Display an extensive knowledge base in airway anatomy
 - Display competency in the surgical airway, specifically tracheostomy and cricothyrotomy
 - o Demonstrate competence in a variety of adjuvant airway management devices
 - Teach medical students basic airway management skills
 - o Teach residents advanced airway management skills
 - Teach advanced difficult airway management courses
 - Serve as a consultant for airway management preoperative, intraoperative and postoperative in obstructive sleep apnea(OSA) patients
 - Serve as a consultant for airway management preoperative, intraoperative and postoperative in morbidly obese patients
 - Conduct an internal review board (IRB) approved application in the field of airway management with the intent of a peer reviewed publication
 - Present a poster/ abstract a national meeting
- Be cognizant of the developmental and social issues that impact the care of patients with complex airway anomalies
- Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences and apply this knowledge to patient care within the complex airway management patient
- Demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence
- Have the skills and resources that will allow them to continue their professional development during and after the fellowship
- Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement
- Work effectively in various health care delivery settings and systems relevant to their clinical specialty
- Coordinate patient care within the health care system relevant to their clinical specialty

- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate
- Advocate for quality patient care and optimal patient care systems
- Work in inter-professional teams to enhance patient safety and improve patient care quality;
 and, participate in identifying system errors and implementing potential systems solutions

GOALS AND OBJECTIVES OF THE REQUIRED ROTATIONS

General Operating Rooms (GOR)

GOALS	OBJECTIVES	INSTRUCTIONAL ACTIVITIES	EVALUATIONS
Medical Knowledge: 1. To achieve the level of independent consultant in gathering diagnostic information making anesthetic plans, providing anesthetic services and performing procedures for the management of common and unique pediatric surgical procedures	1. Describe Comparative Anatomy and Physiology of the airway, both adult and pediatrics 2. Describe the challenges and concerns of anesthesia management for complex airway procedures including but not limited to the following: -Otorhinolaryngology -Bariatrics -Oromaxillofacial - Thoracic - Obstructive Sleep Apnea -Invasive Pulmonology -Flexible Bronchoscopy -Surgical Airway 3. Demonstrate an understanding of the pharmacokinetics and pharmacodynamics of inhalational anesthetics, intravenous anesthetics, local anesthetics, and opioids and their effects on airway management. 4. Demonstrate understanding of the ASA difficult airway algorithm and it pathways in complex airway management scenarios 5. Demonstrate competence in management of basic pediatric and neonatal airway 6. Demonstrate an understanding of fluid management and its effect on the airway 7. Demonstrate understanding of perioperative acute pain management and its effect on the airway 8. Demonstrate familiarity with cricothyrotomy skills in the simulation lab 9. Perform transtracheal, superior laryngeal, and glossopharyngeal nerve blocks 10.Identify basic airway structures utilizing ultrasonography	1. OR rotations 2. Lectures 3. Faculty interaction 4. Rotations through stroboscopy clinic, sleep study, interventional pulmonology,thoracic 5. Otorhinolaryngology call including adult and pediatric airway emergencies, management of angioedema, tracheostomy management 6. Guided and independent reading 7.Participation in Fellows College	Monthly evaluations Electronic case logs Electronic procedure logs Lecture presentation Learning Portfolio Oral Board Cases
Patient Care: 1. To experience a wide variety of complex clinical cases and a challenging patient population	Demonstrate an understanding of the preoperative, intraoperative and postoperative concerns of management of patients with complex airway management disease and complexity Demonstrate the principles of inhalational induction in both adults and pediatric patients Demonstrate appropriate performance of direct laryngoscopy	1. OR rotations 2. Lectures 3. Simulations 4. Faculty interaction 5. Emergency OR call including: neonatal emergencies, pediatric, airway 6-Overnight call with otorhinolaryngology 7. Guided and independent reading	Monthly evaluations Electronic case logs Lecture presentation Learning Portfolio Simulations

	skills in complex adult and pediatric airway management 4. Demonstrate proficiency in flexible fiberoptic and bronchoscopy		
	skills in both adult and pediatric patients		
	5. Demonstrate proficiency in the use of adjuvant airway management devices in multiple categories- rigid bronchoscopy, flexible bronchoscopy, optical stylets, supraglottic, jet ventilation, paraesophageal, videolaryngoscopy, and surgical airway 6 Demonstrate proficiency in the following technical skills - Ability to interpret a sleep study - Assemble and check a jet ventilator - Perform satisfactorily on airway simulation exercises - Perform a basic diagnostic flexible bronchoscopy - Demonstrate proficiency in complex , compound airway management skills - Demonstrate the ability to readily move amongst the pathways in the		
Direction December 1	difficult airway algorithm -Illicit a pertinent history and physical examination of the airway	1. Cimulations	1. Monthly evolutions
and Improvement: 1. To analyze one's own practice systematically and to be able to retrieve, understand and apply scientific evidence related to the practice of anesthesia 2. To participate in the learning of fellow anesthesiologists and other health care professionals	1. Demonstrate the ability to reflect on one's own practice and identify areas that need improvement or can serve as examples for others. 2. Demonstrate the ability to utilize information technology, and primary texts to answer clinical questions 3. Demonstrate the ability to critically evaluate airway related literature and apply scientific evidence to decision making. 4. Demonstrate an appreciation of the impact of one's actions on outcomes. 5. Demonstrate the ability to seek and respond to constructive criticism to improve performance in the six core competencies 6. Demonstrate the ability to effectively supervise the clinical care of adult and pediatric patients by more junior trainees and other anesthesia providers 7. Demonstrate the ability deliver constructive criticism to improve other's performance in the six core competencies 1. Demonstrate effective	1. Simulations 2. Meeting with the Medical librarian for instruction regarding advanced literature searches 3. Prepare and present lectures, QI presentations and M and M conferences 4. Prepare and present Journal Club 5. Daily faculty interactions 6. Guided and independent reading	Monthly evaluations Conference evaluations of fellows' Lectures/QI, Journal Club and M and M presentations Review of learning Portfolio/self-reflection exercises 1. 360 evaluations
Interpersonal and Communications Skills: 1. To work as an effective successful and efficient member of the surgical team by demonstrating communication skills that result in effective information	Demonstrate effective communication with all surgeons, OR nurses, and ICU nurses. Demonstrate valuable communication techniques to decrease patient and patient family anxiety.	Modeling by faculty Observed Work with interpreters Guided and independent reading	1. 360 evaluations

exchange and appropriate interaction with patients, families, other health care professionals, and ancillary personnel. 3. Demonstrate team leadershi skills in the stressful operating renvironment 4. Demonstrate effective and meaningful acquisition of inform consent 5. Demonstrate and understand of and sensitivity to cultural influences in the health care are	om d ng
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Professionalism: 1. To understand the importance of the commitment to excellence inpatient care, adherence to ethical principles, and sensitivity to a diverse patient population. 2. To understand and apply basic principles of biomedical ethics 3. To understand the importance of participation in professional and hospital organizations and committees	1. Demonstrate caring and respectful behaviors when interacting with patients and their families. 2. Demonstrate respect, compassion, integrity and ethical behavior. 3. Demonstrate ability to appropriately take on, share and delegate patient care responsibilities. 4. Demonstrate a commitment to ongoing professional development.	Modeling by faculty Ethics classes Participation in the departmental or hospital committee of the fellow's choice Guided and independent reading	1. 360 Evaluations
Systems Based Practice: 1. To understand the practice of complex airway management in the larger context of health 2. To develop the ability to effectively call on system resources to provide care that is of optimal value.	Demonstrate a basic understanding of the cost of the drugs and equipment commonly used in surgical cases related to airway management Identify at least one new strategy to improve operating room efficiency safely. Demonstrate a basic understanding of the various types of medical practice and delivery systems and how they differ from one another, including methods of controlling health care costs and allocating resources Describe quality assurance and continuous quality improvement techniques used in the practice of anesthesia.	Modeling by faculty Participation in the departmental QI committee Guided and independent reading	Assessment of the participation in QI committee activities

Otorhinolaryngology Rotation

GOALS	OBJECTIVES	INSTRUCTIONAL	EVALUATIONS
Medical Knowledge: 1. To acquire knowledge and understanding of the basic and applied clinical sciences that relate to the basic practice of laryngology	1. Demonstrate an understanding of the essentials of a laryngology history and physical examination. 2. Demonstrate an understanding of the anatomy and innervation of the pharyngeal and laryngeal structures 3. Demonstrate an understanding of the commonly used pharmacology including induction; dosing and side effects of common anesthesia drugs in airway management 4. Demonstrate an understanding of the basic principles of stroboscopy and its impact on anesthetic management of the airway. 5. Demonstrate the ability to interpret a sleep study and devise an appropriate anesthetic management plan 6. Demonstrate knowledge of the anatomy used in an elective tracheostomy 7. Demonstrate familiarity with the cricothyroid membrane and it use in emergent airway management 8. Understand the pathophysiology of tracheal stenosis and its management	1. OR rotations 2. Clinic rotations 3. Service rotations 4. Lectures 5. Faculty interaction 6. Otorhinolaryngology call including adult and pediatric airway emergencies, management of angioedema, tracheostomy management 5. Guided and independent reading	1. Monthly evaluations 2. Electronic case logs 3. Electronic procedure logs 4. Lecture presentation 5. Learning Portfolio
Patient Care: 1.Experience and develop expertise in the clinical challenges of caring of complex airway management cases and scenarios	1. Demonstrate proficiency in basic airway management in adult and pediatric patients 2. Demonstrate familiarity with basic airway equipment used by ORL for direct laryngoscopy 3. Demonstrate proficiency in performing a diagnostic flexible fiber optic examination 4. Demonstrate proficiency in topicalization of the nares for a diagnostic examination 5. Demonstrate knowledge to interpret stroboscopy results and apply them clinically 6. Demonstrate knowledge to interpret a sleep study and them clinically 7. Perform an elective tracheostomy in the OR 8. Participate in the management of angioedema patients	1. OR rotations 2. Clinic rotations 3. Service rotations 4. Lectures 5. Faculty interaction 6. Otorhinolaryngology call including adult and pediatric airway emergencies, management of angioedema, tracheostomy management 7. Guided and independent reading	Monthly evaluations Electronic case logs Electronic Procedure logs Lecture presentation Learning Portfolio

Practice Based Learning and Improvement:

- 1. To analyze one's own practice systematically and to be able to retrieve, understand and apply scientific evidence related to the practice of anesthesia
- 2. To participate in the learning of fellow anesthesiologists and other health care professionals
- 1. Demonstrate the ability to reflect on one's own practice and identify areas that need improvement or can serve as examples for others.
- 2. Demonstrate the ability to utilize information technology, and primary texts to answer clinical questions
- 3. Demonstrate the ability to critically evaluate the pediatric anesthesiology literature and apply scientific evidence to decision making.
- 4. Demonstrate an appreciation of the impact of one's actions on outcomes.
- 5. Demonstrate the ability to seek and respond to constructive criticism to improve performance in the six core competencies
- 6. Demonstrate the ability to effectively supervise the clinical care of complex airway scenarios by more junior trainees and other anesthesia providers
- 7. Demonstrate the ability deliver constructive criticism to improve other's performance in the six core competencies

- 1. Simulations
- 2. Meeting with the Medical librarian for instruction regarding advanced literature searches
- 3. Prepare and present lectures, QI presentations and M and M conferences
- 4. Prepare and present Journal Club
- 5. Daily faculty interactions
- 6. Guided and independent reading

- 1. Monthly evaluations
- 2. Conference evaluations of fellows' Lectures/QI, Journal Club and M and M presentations
- 3. Review of learning
- 4. Portfolio/self-reflection exercises

GOALS	OBJECTIVES	INSTRUCTIONAL ACTIVITIES	EVALUATIONS
Interpersonal and Communication Skills: 1. To work as an effective successful and efficient member of the surgical team by demonstrating communication skills that result in effective information exchange and appropriate interaction with patients, families, other health care professionals, and ancillary personnel.	Demonstrate effective communication with surgeons, OR nurses, and ICU nurses. Demonstrate valuable communication techniques to decrease patient and patient family anxiety. Demonstrate team leadership skills in the stressful operating room environment Demonstrate effective and meaningful acquisition of informed consent Demonstrate and understanding of and sensitivity to cultural influences in the health care arena	Modeling by faculty Observed Work with interpreters Guided and independent reading	1. 360 evaluations
Professionalism: 1. To understand the importance of the commitment to excellence inpatient care, adherence to ethical principles, and sensitivity to a diverse patient population. 2. To understand and apply basic principles of biomedical ethics 3. To understand the importance of participation in professional and hospital organizations and committees	1. Demonstrate caring and respectful behaviors when interacting with patients and their families. 2. Demonstrate respect, compassion, integrity and ethical behavior. 3. Demonstrate ability to appropriately take on, share and delegate patient care responsibilities. 4. Demonstrate a commitment to ongoing professional development.	Modeling by faculty Ethics classes Participation in the departmental or hospital committee of the fellow's choice Guided and independent reading	1. 360 Evaluations
Systems Based Practice: 1. To understand the practice of otorhinolaryngology and its impact on anesthetic management in the larger context of health 2. To develop the ability to effectively call on system resources to provide care that is of optimal value.	Demonstrate a basic understanding of the cost of the drugs and equipment commonly used in anesthetic management of laryngology cases Identify at least one new strategy to improve operating room efficiency safely. Describe quality assurance and continuous quality improvement techniques used in the practice of anesthesia	Modeling by faculty Participation in the departmental and cardiac ICU QI committee Guided and independent reading	360 evaluations Assessment of the participation in QI committees activities

Pulmonology Rotation

GOALS	OBJECTIVES	INSTRUCTIONAL ACTIVITIES	EVALUATIONS
Medical Knowledge: 1. The fellow will gain experience in diagnosis with flexible fiberoptic, dexterity in the manipulation of the fiberoptic scope ,flexible bronchoscopy, and topicalization of the upper and lower airway for flexible bronchoscopy in adults in both the inpatient and outpatient setting. 2. The fellow will be become competent and confidant in the teaching,placement,and troubleshooting of double lumen tubes 3. The fellow will be able to analyze pulmonary function tests in order to facilitate expert management of complex airway scenarios Emphasis during this rotation is placed upon developing and expanding a fellow's knowledge and skill so that he or she can implement, direct and evaluate a basic diagnostic bronchoscopy. Further, the fellow will refine their communication and teaching skills through education and follow-up with consulting and referring subspecialty and primary services as well as with trainees.	1. Acquire and demonstrate knowledge of the following topics: - Anatomy and physiology of the lower airway and the bronchial tree - Effective topicalization of the upper, lower and bronchial tree for diagnostic flexible fiberoptic bronchoscopy - Pharmacology for sedation in flexible bronchoscopy - Pharmacology of local anesthetics - Familiarization with bronchial tree to aid in double lumen tube placement and troubleshooting by participating in basic flexible bronchoscopy .	1. Subspecialty pulmonology lecture series 2. Daily faculty interaction 3. Guided and independent reading	1. Monthly evaluations 2. Electronic Case logs 3. Electronic Procedure logs 4. Fellow Lecture presentation 5. Review of Learning Portfolio
Patient Care: 1. Become part of and learn to lead a multidisciplinary team participating in the use of flexible bronchoscopy to aid in the evaluation, diagnosis, and treatment of complex airway management cases, diagnosis and treatment of hypoxia, evaluation of foreign body in adults. These skills will aid in the implementation of a	1. Demonstrate the use of flexible bronchoscopy for foreign body diagnosis, differential for hypoxia 2. Perform a thorough medical history, physical examination and assemble pertinent laboratory and imaging studies. 3. Present findings from the medical history, physical examination, laboratory and imaging studies that are focused on the airway management problem.	Subspecialty pulmonology lecture series Daily faculty interaction Guided and independent reading	1. Monthly evaluations 2. Electronic case logs 3. Electronic Procedure logs 4. Fellow Lecture presentation 5. Review of Learning Portfolio

treatment plan that may	4. Formulate and outline		
include medical	therapeutic options appropriate		
management,	for the patient's airway related		
interventional procedures	problem.		
or therapies.	5. Demonstrate the ability to		
	provide consultations for adults		
	with acute lower airway and		
	bronchial tree problems		
	6.Demonstrate the ability to		
	provide consultations for adults		
	requiring sedation in the		
	intensive care unit, pulmonology		
	unit and intraoperative for flexible		
	bronchoscopy		
Practice Based Learning	Demonstrate the ability to	1. Simulations	1. Monthly
and Improvement:	reflect on one's own practice and	Meeting with the	evaluations
To analyze one's own	identify areas that need	Medical librarian for	2. Conference
	improvement or can serve as		evaluations of fellows'
practice systematically and	· ·	instruction regarding	
to be able to retrieve,	examples for others.	advanced literature	Lectures/QI, Journal
understand and apply	2. Demonstrate the ability to	searches	Club and M and M
scientific evidence related	utilize information technology,	3. Prepare and present	presentations
to the practice of pain	and primary texts to answer	lectures, QI	3. Review of learning
management	clinical questions	presentations and M and	4. Portfolio/self-
2. To participate in the	3. Demonstrate the ability to	M conferences	reflection exercises
learning of fellow	critically evaluate the pediatric	4. Prepare and present	
anesthesiologists and other	pain literature and apply	Journal Club	
health care professionals	scientific evidence to decision	5. Daily faculty	
	making.	interactions	
	4. Demonstrate an appreciation	6. Guided and	
	of the impact of one's actions on	independent reading	
	outcomes.		
	Demonstrate the ability to		
	seek and respond to constructive		
	criticism to improve performance		
	in the six core competencies		
	6. Demonstrate the ability to		
	effectively supervise the clinical		
	care of pediatric patients by		
	more junior trainees and other		
	anesthesia providers		
	7. Demonstrate the ability		
	deliver constructive criticism to		
	improve other's performance in		
	the six core competencies		
Interpersonal and	Demonstrate effective	Modeling by faculty	1. 360 evaluations
Communication Skills:	communication as a consultant	2. Observed Work with	ooo ovaluations
1. To work as an effective	with other health care	interpreters	
successful and efficient	professionals.	3. Guided and	
member of the consultant	2. Demonstrate valuable		
		independent reading	
service team by	communication techniques to		
demonstrating	decrease patient and patient		
communication skills that	family anxiety.		
result in effective	3. Demonstrate effective and		
information exchange and	meaningful acquisition of		
appropriate interaction with	informed consent		
patients, families, other	4. Demonstrate and		
health care professionals,	understanding of and sensitivity		
and ancillary personnel.	to cultural influences in the		
	health care arena		1

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Professionalism:	Demonstrate caring and	Modeling by faculty	1. 360 Evaluations
To understand the	respectful behaviors when	2. Ethics classes	
importance of the	interacting with patients and their	3. Guided and	
commitment to excellence	families.	independent reading	
inpatient care, adherence	2. Demonstrate respect,		
to ethical principles, and	compassion, integrity and ethical		
sensitivity to a diverse	behavior.		
patient population.	3. Demonstrate ability to		
2. To understand and	appropriately take on, share and		
apply basic principles of	delegate patient care		
biomedical ethics	responsibilities.		
3. To understand the	4. Demonstrate a commitment to		
importance of participation	ongoing professional		
in professional and hospital	development.		
organizations and			
committees			
Systems Based Medicine	Demonstrate a basic	Modeling by faculty	1. 360 evaluations
1. To understand the	understanding of the drugs and	2. Participation in the	2. Assessment of the
practice of interventional	equipment commonly used in	departmental QI	participation in QI
pulmonology and its impact	interventional pulmonology	committee	committee activities
on airway management in	2. Identify at least one new	3. Guided and	
the larger context of health	strategy to differential diagnosis	independent reading	
2. To develop the ability to	of hypoxia using bronchoscopy		
effectively call on system	routinely in the operating room		
resources to provide care	3. Demonstrate a basic		
that is of optimal value.	understanding of the various		
	types of medical practice and		
	delivery systems and how they		
	differ from one another, including		
	methods of controlling health		
	care costs and allocating		
	resources		
	4. Describe quality assurance		
	and continuous quality		
	improvement techniques used in		
	the interventional pulmonology		
	and its impact on airway		
	management		

APPENDIX B – sample calendar

AIRWAY /ORL FELLOWSHIP SAMPLE CALENDAR: 2013-2014 YEAR

7/1-7/28 Intro to Montefiore Anesthesiology Dept. /General OR (ENT, Bariatrics, OMFS, Thoracic /Intro to Airway Education Log)

7/29-8/25 Intro to ENT. ENT Service Clinic M, W, F office hours

7/1-6/30 Research: developing an abstract/research project

9/9-9/22 Interventional Pulmonology (Dr. Klapper – Montefiore)

9/23-10/6 ENT: Sleep Clinic (Dr. Park) + Friday morning Stroboscopy clinic (Dr. Tan)/ General OR

10/7-10/20 General OR + Friday morning Stroboscopy clinic + Airway simulator

10/21-11/3 Thoracic rotation (Dr.Bhagava)

11/4-11/17 ENT: MWF Clinics, General OR/Research.

11/18-12/15 ENT OR

12/16-12/29 General OR + Friday AM Stroboscopy clinic

12/30-1/12 Sleep Clinic + Friday AM stroboscopy clinic

1/13-1/26 Interventional Pulmonology (Dr. Clmino – Weiler)

1/27-2/9 ENT OR + MWF clinics

2/10-2/23 ENT OR + Bedside trach/ Head and neck

2/24-3/9 General OR + Friday AM Stroboscopy clinic + Airway simulator

3/10-3/23 Thoracic Surgery

3/24-4/6 General OR Tues/Thurs + MWF ENT clinic

4/7-4/20 General OR + Stroboscopy clinic

4/21-5/4 Research weeks

5/5-5/18 ENT: MWF ENT Clinics. Tue/Thurs work on research.

5/19-6/1 General OR + Stroboscopy clinic

6/2-6/30 Vacation weeks

^{*2} week blocks

^{**}Starting 7/29, fellows will be taking ENT calls with the team 3-4 times a month.

^{***} One day /week, fellow will work in the general operating room and function as an attending

^{****}Schedule may vary due to vacation time and meeting time