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Evaluation & Management of A Pediatric Patient with Obesity

Description of the Activity	Obesity is a common condition affecting at least 14.5 million children in the United States. It is encountered by pediatric surgeons in elective and emergent care settings when treating a myriad of pediatric surgical conditions. It is now so common that pediatric bariatric surgery has become a mainstay of severe obesity treatment in childhood. The essential function of this activity is the definitive treatment of severe obesity in childhood and the recognition of how obesity affects the care of children with other pediatric surgical conditions.
Functions	❖ Nonoperative/Preoperative • Recognize the information needed to diagnose the multiple genotypes that lead to the obesity phenotype and its classification. • Perform a workup as it pertains to bariatric surgery and other pediatric surgery procedures. • Communicate the diagnosis and treatment options to the patient and family/caregiver(s) using patient-first language. • Obtain informed consent, describing the indications, risks, benefits, alternatives, and potential complications of the planned operation, including nuances relevant to the patient's individual condition and comorbidities, and ensure familial understanding. Document the informed consent discussion in the medical record. • Devise an operative plan, and communicate it to the operative team (anesthesia, nursing, techs, assistants), including patient position, anesthesia needs, special instrumentation, and postoperative planning. ❖ Intraoperative • Perform bariatric surgery procedures. • Recognize intraoperative complications of surgical treatment of obesity. • Perform technical modifications for patients with obesity who are undergoing other pediatric surgical procedures. ❖ Postoperative • Implement unique postoperative care requirements for patients with obesity. • Identify short- and long-term complications of bariatric surgery and how to manage them. • Recognize when to refer a patient for postoperative antiobesity medication or other subspecialty management. • Recognize the need and indications for revisional surgery.
Scope	❖ In scope ❖ Diagnoses ▪ Hypothalamic obesity ▪ Monogenic obesity ▪ Polygenic obesity ▪ Syndromic obesity

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	❖ Procedures • Laparoscopic Roux-en-Y gastric bypass • Laparoscopic sleeve gastrectomy • Special considerations in general surgery procedures commonly performed in patients with obesity (eg, appendectomy, cholecystectomy) ❖ Special populations ▪ Autism spectrum disorders associated with obesity ❖ Out of scope ❖ Diagnoses/procedures ▪ Adult patients ▪ Endoscopic therapies or other devices not approved in patients under 18 ▪ Revisional surgery ▪ Single anastomosis duodenal-ileal bypass (with or without sleeve gastrectomy), biliopancreatic diversion/duodenal switch, and other malabsorptive procedures not currently used in the pediatric population

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1 **Framework:** The learner demonstrates understanding of information and has basic skills What a new pediatric surgery fellow should know Entrustment: The attending will show and tell or the learner acts as first assistant.	• With active guidance, obtains and synthesizes essential information from a patient's medical record, H&P, and initial diagnostic evaluation to develop a treatment plan for a primary diagnosis, with consideration for how childhood obesity may impact the operative plan (e.g., VTE prophylaxis, anesthesia in patients with OSA, anti-obesity medication cessation) • With active guidance, discusses with the patient and family how obesity impacts the primary diagnosis (e.g., biliary colic) and the surgical plan, including the option of obesity treatment before or concomitant with treatment of the primary diagnosis • Demonstrates understanding that the pathophysiology and treatment of obesity-related conditions in children differ from those in adults • With active guidance, uses patient-first language to communicate the diagnosis and risks and benefits of different treatment options to the family and medical team/consultants and how obesity impacts these treatment options	• With active guidance, identifies the need for changes in trocar choice (e.g., length) and placement and other appropriate MIS or open procedure instrumentation (e.g., retractor options) when impacted by obesity • With active guidance, aids with OR setup to include additional equipment required for a patient with severe obesity (e.g., lift assist devices) • With active guidance, discusses how the course of general abdominal or bariatric surgery procedures may differ in children with obesity • With active guidance, identifies pitfalls for intraop complications associated with general abdominal or bariatric procedures in children with obesity, including but not exclusive to increased risk of bleeding and difficulties with exposure (e.g., insufflation pressure)	• With active guidance, implements a postop management plan for a child with severe obesity after a general abdominal procedure or bariatric surgery that includes a VTE prophylaxis plan and any additional changes to the usual postop plan based on the patient's obesity-related comorbidities • With active guidance, demonstrates understanding of how to identify acute complications associated with children with severe obesity such as intra-abdominal bleeding, SSI, VTE, and pulmonary insufficiency, and for bariatric procedures, staple line leak, oral intolerance, biliary colic, weight regain, and bowel obstruction • Demonstrates basic understanding of the long-term outcomes for children with obesity with or without bariatric surgery, including in special populations • With active guidance, communicates with family/guardians/care teams to ensure postop instructions, goals, and expectations are understood • With active guidance, uses patient-first language to discuss the health impact of childhood obesity and options for obesity treatment if available at the local institution

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2 **Framework:** The learner demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case Entrustment: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression or may need to take over the case at a certain point .	• With direct supervision, obtains and synthesizes essential information from a patient's medical record, H&P, and initial diagnostic evaluation to develop a treatment plan for a primary diagnosis, with consideration for how obesity may impact the operative plan (e.g., VTE prophylaxis, anesthesia in patients with OSA, anti-obesity medication cessation) • With direct supervision, discusses with the patient and family how obesity impacts the primary diagnosis (e.g., biliary colic) and the surgical plan, including the option of obesity treatment • Demonstrates basic knowledge of pathophysiology and treatment of obesity-related conditions in children and how they differ from those in adults • With direct supervision, identifies the appropriate operative timing, approach, and technique based on the severity of the patient's obesity and current obesity-related comorbidities	• With direct supervision, changes trocar choice (length) and placement and implements other appropriate MIS or open procedure instrumentation when impacted by obesity • With direct supervision, sets up the OR to include additional equipment required for a patient with severe obesity (e.g., lift assist devices) • With direct supervision, progresses through the course of a general abdominal or bariatric procedure in a patient with obesity • With direct supervision, identifies pitfalls for intraop complications associated with general abdominal or bariatric procedures, including but not exclusive to increased risk of bleeding and difficulties with exposure (e.g., insufflation pressure)	• With passive guidance, implements a postop management plan for a child with severe obesity after a general abdominal procedure or bariatric surgery that includes a VTE prophylaxis plan and any additional changes to the usual postop plan based on the patient's obesity-related comorbidities • With passive guidance, identifies and treats acute complications associated with children with severe obesity or bariatric surgery such as intra-abdominal bleeding, SSI, VTE, and pulmonary insufficiency, and for bariatric procedures, staple line leak, oral intolerance, biliary colic, weight regain, and bowel obstruction • Demonstrates thorough understanding of the long-term outcomes for children with obesity with or without bariatric surgery, including in special populations • With direct supervision, uses patient-first language to communicate with family/guardians/care teams to ensure postop instructions, goals, and expectations are understood • With direct supervision, uses patient-first language to discuss the health impact of childhood obesity and options for obesity treatment if available at the local institution

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3 **Framework:** The learner has a good understanding of surgical options and techniques but does not recognize abnormalities and does not understand the nuances of a complicated case Entrustment: The learner can perform the operation/task independently in the uncomplicated patient or The attending provides passive/indirect supervision/suggestions in the complicated patient but still allows the learner to perform the operation/task themselves	• With indirect supervision, synthesizes essential information from a patient's medical record, H&P, and initial diagnostic evaluation to develop a treatment plan for a primary diagnosis, with consideration for how obesity may impact the operative plan (e.g., VTE prophylaxis, anesthesia in patients with OSA, anti-obesity medication cessation) • With indirect supervision, discusses with the patient and family how obesity impacts the primary diagnosis (eg, biliary colic) and the surgical plan, including the option of obesity treatment before or concomitant with treatment of the primary diagnosis • Demonstrates advanced knowledge of pathophysiology and treatment of obesity-related conditions in children and how they differ from those in adults • With indirect supervision, identifies the appropriate operative timing, approach, and technique based on the severity of the patient's obesity and current obesity-related comorbidities	• With indirect supervision, changes trocar choice (length) and placement and implements other appropriate MIS or open procedure instrumentation when impacted by obesity • With indirect supervision, sets up the OR to include additional equipment required for a patient with severe obesity (eg, lift assist devices) • With indirect supervision, progresses through the course of a general abdominal or bariatric operation in a patient with obesity • With indirect supervision, identifies pitfalls for intraop complications associated with general abdominal or bariatric procedures in children with obesity, including but not exclusive to increased risk of bleeding and difficulties with exposure (eg, insufflation pressure)	• With indirect supervision, implements a postop management plan for a child with severe obesity after a general abdominal procedure or bariatric surgery that includes a VTE prophylaxis plan and any additional changes to the usual postop plan based on the patient's obesity-related comorbidities • With indirect supervision, identifies and treats acute complications associated with children with severe obesity or bariatric surgery such as intra-abdominal bleeding, SSI, VTE, pulmonary insufficiency, and for bariatric procedures, staple line leak, oral intolerance, biliary colic, weight regain, and bowel obstruction • Demonstrates advanced understanding of the long-term outcomes for children with obesity with or without bariatric surgery, including in special populations • With indirect supervision, uses patient-first language to communicate with family/guardians/care teams to ensure postop instructions, goals, and expectations are understood • With indirect supervision, uses patient-first language to discuss the health impact of childhood obesity and options for obesity treatment if available at the local institution

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4 **Framework:** The learner has a strong and indepth understanding of surgical options and techniques Entrustment: Can perform the operation/task independently in complicated cases **or** The attending may need to provide indirect supervision or suggestions in the context of extremely rare or severely complicated cases	• Independently obtains and synthesizes essential information from a patient's medical record, H&P, and initial diagnostic evaluation to develop a treatment plan for a primary diagnosis, with consideration for how obesity may impact the operative plan (eg, VTE prophylaxis, anesthesia in patients with OSA, anti-obesity medication cessation) • Independently discusses with the patient and family how obesity impacts the primary diagnosis (eg, biliary colic) and the surgical plan, including the option of obesity treatment before or concomitant with treatment of the primary diagnosis • Independently demonstrates comprehensive knowledge of pathophysiology and treatment of obesity-related conditions in children and how they differ from those in adults. • Independently identifies the appropriate operative timing, approach, and technique based on the severity of the patient's obesity and current obesity-related comorbidities	• Independently implements changes in trocar choice (length) and placement and other appropriate MIS or open procedure instrumentation (retractor options) when impacted by obesity • Independently sets up the OR to include additional equipment required for a patient with severe obesity (eg, lift assist devices) • Independently moves through the course of a general abdominal or bariatric operation in a patient with obesity • Independently identifies pitfalls for intraop complications associated with general abdominal or bariatric procedures in children with obesity, including but not exclusive to increased risk of bleeding and difficulties with exposure (eg, insufflation pressure)	• Independently implements a postop management plan for a child with severe obesity after a general abdominal procedure or bariatric surgery that includes a VTE prophylaxis plan and any additional changes to the usual postoperative plan based on the patient's obesity-related comorbidities • Independently identifies and treats acute surgical complications associated with severe obesity or bariatric surgery such as staple line leak or bleeding, oral intolerance, biliary colic, weight regain, and bowel obstruction • Demonstrates comprehensive understanding of the long-term outcomes for children with obesity with or without bariatric surgery, including in special populations • Independently uses patient-first language to communicate with family/guardians/care teams to ensure postop instructions, goals, and expectations are understood • Independently uses patient-first language to discuss the health impact of childhood obesity and options for obesity treatment if available at the local institution