

1 **Title:** Learning the Cleveland Clinic Way: A Medical Student Experience as an Acting Intern in Colorectal
2 Surgery

3
4 **Article type:** Experience

5
6 **Author names:** Sidharth Misra

7
8 **Degrees and Affiliations:**

- 9 1. Final year Medical Student. Armed Forces Medical College, Pune, India

10

11 **ORCID (Open Researcher and Contributor Identifier):**

12 <https://orcid.org/0000-0002-3985-8595>

13

14 **About the author:** Sidharth Misra is currently a final year medical student at Armed Forces Medical College,
15 Pune, India. He has had an experience of 6 and a half months in the US in various surgical fields as an acting
16 intern.

17

18 **Corresponding author email:** misra.sidharth.afmc@gmail.com

19

20 **Acknowledgment:** None.

21

22 **Financing:** No financial disclosures

23

24 **Conflict of interest statement by authors:** No conflicts of interest to be disclosed.

25

26 **Compliance with ethical standards:** All patient details made anonymous.

27

28 **Authors Contribution Statement:** Conceptualization: SM. Methodology: SM. Investigation: SM. Writing –
29 Original Draft: SM. Writing – Review & Editing: SM. Visualization: SM.

30

31 **Manuscript word count:** 918 words

32 **Abstract word count:** 117 words

33 **Number of Figures:** 1

34

35 **Personal, Professional, and Institutional Social Network accounts**

36

- 37 • **Linkedin:** [linkedin.com/in/sidharth-misra-527185261](https://www.linkedin.com/in/sidharth-misra-527185261)

38

39

40

41

1 **Discussion Points:**

2
3
4
5
6
7
8

1. The experience of an international medical student as an acting intern
2. Witnessing colorectal surgery at the Cleveland Clinic
3. Importance of clinical experience to get a residency in the US.
4. Multidisciplinary learning atmosphere at the Cleveland Clinic

9 **Dates**

10 Submission: 07/14/2023
11 Revisions: 10/17/2023
12 Responses: 11/02/2023
13 Acceptance: 04/17/2024
14 Publication: 04/13/2024

15

16 **Editors**

17 Associate Editor/Editor: Francisco J. Bonilla-Escobar

18

19 Student Editors: Ahmed Nahian, Carlos de la Cruz-de la Cruz & Aurele Berjo Takoutsing Dongmo

20 Copyeditor:

21 Proofreader:

22 Layout Editor:

23

24 **Publisher's Disclosure:** *This is a PDF file of an unedited manuscript that has been accepted for publication.*
25 *As a service to our readers and authors we are providing this early version of the manuscript. The manuscript*
26 *will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable*
27 *form. Please note that during the production process errors may be discovered which could affect the content,*
28 *and all legal disclaimers that apply to the journal pertain.*

29

30

31

1 **ABSTRACT.**

2

3 Gaining hands on clinical experience in the US as a medical student is an important prerequisite for securing a
4 residency spot in the US. These clinical electives in surgery enable the medical student to witness the process
5 of providing healthcare to patients from the time of the first clinic visit to the post operative recovery phase of
6 the patient after surgery. This is especially crucial for international medical students who are used to a different
7 type of medical system back in their home country. Getting an opportunity to rotate in the department of
8 Colorectal surgery at the Cleveland Clinic is an opportunity of a lifetime. This is my experience at the Cleveland
9 Clinic as an acting intern.

10

11 **Key Words:** medical student; residency; general surgery.

12

Accepted, in-press

1 THE EXPERIENCE

2
3 Embarking on this journey amidst the wintry Cleveland months, I had the honor of immersing myself in world-
4 class medical practice to accomplish the daunting task of acquiring US clinical experience.¹ Traveling from India
5 to Cleveland, a journey spanning 28 hours, led me to 'The Clinic,' a heavenly place renowned for its rich history
6 and excellence.² I was privileged to pursue my acting internship under the esteemed leadership of the
7 'Colorectal Surgery Department Chair', a famous name in the field of colorectal surgery. His persona, expertise
8 and compassionate approach have left a lasting impression on me. The fellow to whom I reported on my first
9 day has been an invaluable guide, providing an extraordinary learning experience that can only be described
10 as surreal. (Figure 1) It was a 4-week period which seemed short enough, but I can still relive every moment of
11 it which makes the rotation so special.

12
13 "Morning rounds at 6:15 am" was the first message I received from my fellow. A typical week generally consisted
14 of days for OR (operating room), clinic, colonoscopy and dedicated teaching/learning didactic sessions. This
15 structured learning schedule was important to strike a balance between the preoperative, intraoperative, and
16 postoperative management of the patient.

17
18 On OR days, my responsibilities included assisting the surgical team, facilitating patient transportation, ensuring
19 patient comfort on the surgical table, aiding in patient preparation, and attentively following my fellow's
20 commands. The daily procedures ranged from complex colon surgeries like laparoscopic hemicolectomies,
21 sigmoid colectomies, and abdominoperineal resections to rectal surgeries such as hemorrhoidectomies, Martius
22 flap repair, anorectal fistulotomy, and Botox injections. Through discussions with my fellow post-surgery, I
23 gained insights into surgical decision-making, technique selection, and crucial anatomical considerations. These
24 mind stimulating conversations were important to breed the inner surgeon in me as an aspiring medical
25 student/doctor. It also became clear to me that anticipating the next steps in a surgery and learning how to
26 assist the primary surgeon are crucial to becoming a good surgeon. Additionally, I acquired skills in team
27 coordination, understanding the balance between stepping back and taking an active role in the OR process.
28 Scrubbing in for almost every case, I had the opportunity to appreciate anatomy, suture under my fellow's
29 supervision, and even assist in laparoscopic surgeries by driving the camera—a true art in itself. Recognizing
30 the significance of fostering positive relationships with the OR staff, I understood that successful surgery relies
31 on a collaborative team effort.

32
33 As a medical student, my clinic responsibilities entailed obtaining comprehensive patient histories and
34 meticulously updating the electronic medical records. The art of crafting structured, and methodical clinic notes
35 required substantial practice. In the beginning, my focus was to observe the art of patient interaction while
36 ensuring I maintained pace. Prior to each clinic session, understanding the purpose of the patient's visit became
37 paramount. The various reasons for patient visits included preoperative consultations to elucidate surgical
38 details and postoperative progress, routine postoperative colonoscopy/sigmoidoscopy/pouchoscopy, or new
39 visits entailing initial complaint discussions and subsequent steps. In addition, I had the privilege of learning
40 from specialized wound ostomy care nurses. Their expertise lies in stoma care, including patient stoma marking
41 prior to surgery, as well as providing pre- and post- operative counselling.³ Witnessing the seamless execution

1 of such comprehensive care underscored the significance of well-defined roles and responsibilities. Moreover,
2 it reinforced the understanding that effective task delegation is pivotal in maximizing productivity within a given
3 timeframe.

4
5 Friday colonoscopies served as a satisfying culmination of the week, typically involving general screenings,
6 post-diverticulitis evaluations, or follow-up colonoscopies/pouchoscopies. In my capacity as a medical student,
7 my primary role was ensuring efficient patient turnover by assisting with patient transportation, obtaining consent
8 alongside my fellow prior to the procedure, and significantly, developing a keen understanding of colonic
9 anatomy and colonoscopy techniques. The importance of ergonomics struck me deeply, particularly upon
10 learning about the prevalence of carpal tunnel syndrome amongst endoscopists due to extensive colonoscopy
11 procedures.⁴ This revelation was reinforced by witnessing a senior colorectal surgeon wearing a wrist brace.
12 The entire experience taught me the importance of effective communication to help improve patient comfort and
13 overall experience.

14
15 During my 4-week rotation, every Wednesday from 6:30 to 7:00 am, I had the opportunity to witness
16 comprehensive presentations given by colorectal surgery fellows on important topics like ischemic colitis,
17 anastomotic leaks, stricturoplasty, and key insights from complex cases. This was followed by surgery grand
18 rounds at 7:30 am that featured a resident presenting a case, providing a detailed timeline and surgical details,
19 followed by robust discussions on encountered complications, preventive measures, and valuable takeaways.
20 The entire spectrum from junior residents to senior attendings would actively participate in these discussions,
21 fostering a remarkable, non-judgemental, and inclusive learning environment. This exemplifies why Cleveland
22 Clinic has been at the forefront of innovation, research, and producing leaders in the field of medicine since its
23 inception in 1921.⁵

24
25 Becoming a skilled surgeon requires keen observation and attentiveness with continuous analysis of the
26 situation to actively contribute to the surgical team. It demands lifelong learning with each stage of surgical
27 training marking a new chapter in one's professional development. Teamwork and supporting fellow team
28 members are essential qualities for a successful surgeon, as the surgical process relies on effective
29 collaboration. The beauty of surgery lies in the meticulous attention to detail, a skill cultivated through dedicated
30 practice and self-reflection. Every moment of this unforgettable experience is vividly etched in my memory, and
31 I am looking forward to the next phase of my life that is attaining a general surgery residency in the US.

1 **REFERENCES.**

2

3 1. Anteby R. A Foot in the Door: Foreign International Medical Students' Obstacles to Hands-On Clinical
4 Electives in the United States. Acad Med. 2020 Jul;95(7):973–4.

5

6 2. Stoller JK. The Cleveland Clinic: a distinctive model of American medicine. Ann Transl Med. 2014
7 Apr;2(4):33.

8

9 3. Liu X li, Wang L. A review of the development and current status of wound ostomy continence nurses
10 in the mainland of China. Int J Nurs Sci. 2018 Apr;5(2):105–9.

11

12 4. Shah SZ, Rehman ST, Khan A, Hussain MM, Ali M, Sarwar S, et al. Ergonomics of gastrointestinal
13 endoscopies: Musculoskeletal injury among endoscopy physicians, nurses, and technicians. World J
14 Gastrointest Endosc. 2022 Mar 16;14(3):142–52.

15

16 5. Hess CA, Barss C, Stoller JK. Developing a leadership pipeline: the Cleveland Clinic experience.
17 Perspect Med Educ. 2014 Aug 1;3(5):383–90.

18

19

20

21

22

Accepted, in press

1 **FIGURES AND TABLES.**

2
3 **Figure 1.** A Picture with my fellow in the Colorectal OR at Cleveland Clinic
4



5
6
7