SURGICAL SUCCESS

HOW TO DOMINATE RESIDENCY!

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How to DOMINATE

Welcome to the field of general surgery, where you will combine your medical knowledge with surgical skills to save the world! First of all, this is NOT a survival manual. Why? Because if your goal is to survive, you have already failed. Instead adopt the "dominate" mentality. Show up to work each day with the intent of doing everything to the best of your abilities and working harder than anyone you know. The purpose of this manual is to teach you all the things people expect you to know but never tell you.

"Standard of Excellence"

The patient **always** comes first. Laziness is unacceptable.

Be the most professional team in the hospital.

Never lie. If you do not know something about your patient or forgot to check, just say so. One lie can kill a patient (and destroy your reputation).

Do not speak negatively about others (patients, nurses, students, residents, attendings, etc.).

Do not complain. *You* chose to be here. Enjoy it!

Accept consults happily. Don't argue or be rude. Doing so will not decrease your workload, but it will make you and the entire department look bad.

Don't ever say "I'm ***just*** the intern."

What's ***your*** standard of excellence? (Put it in writing!)

General Surgery Presentation Outline

Your goal every time you present is to convey the greatest amount of knowledge about the patient in the fewest words possible (talk less, say more!). Don't just be a data reporter; instead, summarize and evaluate the data (remember: information does NOT equal knowledge). Think about how all the information about the patient fits together to create an assessment and plan. Your goal is to tell a coherent story (not one with contradictory & irrelevant statements).

Patient ID: (Name) is a (age) man/woman who is HD/POD # with/from (diagnosis/operation)
-Do not say "our" patient (we don't own the patient)
-Do not say gentleman (this may not be true)
-Do not go into unnecessary details about a patient's social status

24 hour summary
-Key events that change the patient's status (only **PERTINENT** imaging, procedures, key medication changes, transfers to different level of care, bowel function)

Vital Signs (not "Vitals") & Intake/Output
-Range of values: T max, SBP (MAP for ICU), HR, RR, O2 sat (amount of oxygen required)
-Total intake, PO; total output, urine, drain output (NG, chest tube, JP etc. - describe appearance of the fluid coming out of every drain and know the location of each drain)
-Round vital signs and I/O to nearest appropriate level (don't say 2365 ml of UO - say 2.4L); know the current UOP/hr for ICU patients; however, do not report the average UOP/hr for the whole 24 hour period (this is useless since the patient may have had great UOP 10 hours ago, but now has oliguria – the 24 hour average would not reveal this)
-Avoid giving a "net" total for ins and outs. The ins & outs you see only represents what is recorded by the nurses, which may not always be accurate and never includes insensible fluid losses.
-Be careful when saying "within normal" (vital signs are often NOT normal when we say they are), and avoid saying "stable" (a dead patient has stable vital signs)

Physical exam
-Avoid jargon (such as NAD, CDI etc. - just describe what you see on exam; e.g. patient appears comfortable, incision has staples, with no drainage or erythema)
-Look at the patient's wound every day
-Always exam the **AFFECTED** part (e.g. if the patient has lower extremity ischemia, you must know the pulse and neurological exam for that extremity; it is amazing how often we miss this)
-Examine all tubes/lines/drains daily and ensure that they are functional (relate this to the patient's diagnosis – i.e. if it is a drain left after cholecystectomy, is there bile drainage?)
-Include the pertinent negatives (think about the patient's diagnosis – i.e. if the patient is there for a bowel obstruction, mention the groin and rectal exam when you examine them initially)

Labs
-Report pertinent labs for the day and put them in context (e.g. a WBC of 20K is meaningless without knowing the trend - was it 30K yesterday or 10K?)
-Round the lab value to the appropriate level (HCT to nearest whole number, Cr to the nearest tenth)

Imaging
-Describe the findings of new studies after looking at the images on your own (the only way to learn how to read images is by practicing). It is OK to report the radiologist's interpretation in addition; however, never say "the x-ray was done but we're waiting on the radiologist's report."

Assessment
-This is the **MOST IMPORTANT** part, don't leave it out (many of us jump straight to the plan)
-This should be your diagnosis or differential diagnosis (in order of most to least likely)
-This should be very brief (ideally one sentence). Do not repeat the entire HPI!

Plan
-The plan should be consistent with the assessment and every problem should be addressed
-When presenting by systems, don't add suffix "-wise" (e.g. respiratory-wise, cardiovascular-wise, etc.)

General tips
-Use generic medication names instead of brand names (say clopidogrel, not plavix, metronidazole, not flagyl)
-Choose your words carefully. It is always best to use the most specific word possible
-Don't repeat information. If your presentation is so long that people can't remember what you said at the beginning, you've failed at converting information into knowledge!
-Minimize filler words such as: umhh, you know, actually, honestly…
-Develop confidence. Minimize the use of mitigating words or phrases such as: maybe, slightly, sort of, I think…
-Make decisions rather than asking what the plan should be. This forces you to think. If you are wrong, the team will let you know; this is one of the best ways to learn.

Notes
Your patient notes are an extension of your patient presentations. Legibility is no longer a problem thanks to the EMR; the problem now is "readability" and accuracy. Most notes are filled with so much extraneous and useless information that it's difficult to know what's real or relevant. Clearly, information does not equal knowledge here. It's no exaggeration that an accurate note may save the patient's life, while an inaccurate note may kill the patient! Take pride in your notes, because they are a reflection of your work ethic and your attention to detail; sloppy notes equal sloppy work ethic. Nobody wants that on their team.

Surgery Patient Management 101

Most important: what is the patient's MAIN reason for admission? Does the patient need further tests or treatments?

Neurologic: What type of pain meds should the patient receive? (Transition from PCA to PO + IV breakthrough when tolerating PO)

Respiratory: Is the patient using the incentive spirometer? (You should know there IS value everyday). Does the patient need RT? Is a CXR needed? Are chest tube settings appropriate?

Cardiovascular: Is the patient on a beta blocker? If so, continue it (always write hold parameters, such as: "hold for SBP < 100 or HR <60"). Can central lines & arterial lines be removed?

FEN: Know PO status, and type/amount of IVF (does the patient need resuscitation or maintenance fluids?). Order TPN if needed & obtain weekly nutrition labs; know the calories and amount of protein the patient needs and is receiving (also true for tube feedings).

GI: Does the patient have an NG tube? If so, flush it often (and write for the nurses to do so as well); I've never seen an NG tube that actually worked without frequent flushing of both the air/sump port (with air) and the main port (with water). Add a bowel care regimen (docusate/senokot or metamucil) for almost all patients (unless they have a bowel obstruction). Add miralax if patient's are receiving high doses of narcotics. Write PRN zofran for almost all patients (but minimize use in elderly patients – may cause delirium).

GU: Always be aware of the patient's urine output and overall fluid status. Urine output is usually the best measure of volume status. Do not wait till the morning to realize that the patient is oliguric. Is a Foley catheter needed? Can the Foley catheter be removed? (Do not remove if the patient has an epidural catheter; and wait at least 48 hours since the last failed voiding trial). After the Foley catheter is removed, ensure that the patient voids >200 mls in the next 8 hours – if they fail to do so, obtain a bladder scan; generally, reinsert the catheter if their bladder volume is >300ml. (This indicates inadequate emptying and can lead to neurogenic bladder if not treated appropriately).

Hematology: Does the patient need a CBC (are you concerned about bleeding or an infection?) or INR/PTT (is the patient on warfarin or heparin, or have an upcoming procedure?). Only order labs that you actually need and put the order in the night before you need them.

ID: If the patient is on antibiotics, know the source being treated and duration of treatment (if you don't know, look it up), as well as latest Gram stain and culture results.

Endocrine: Be careful with patients on insulin. We usually hold metformin in the hospital (risk of lactic acidosis – especially with renal failure) and start an insulin sliding scale. If the patient is NPO, reduce insulin (cut lantus dose in half) and place on IVF that contains dextrose (hypoglycemia can kill a patient!).

MSK: Is the patient getting out of bed daily? Working with PT?

PPx: Start prophylactic heparin (or LMWH) unless contraindicated (any significant bleeding, risk of bleeding or coagulopathy); periodically check platelet count for HIT.

Tubes/lines/drains: Ensure that these are in the correct location (know the exact location of drains) and are functioning and well-secured (flush NG tubes, strip drains, ensure Foley catheter isn't kinked, ensure that chest tubes are correctly set up). Are these drains/tubes still needed? What is your end point for removing them?

Disposition: What needs to be done to get the patient home? (supplies, home health, SNF arrangements); speak with the discharge planner early on and frequently.

Miscellaneous:

-If you order something (labs, imaging, consults) – ALWAYS follow up on the results promptly.
-Always leave a brief note when seeing a patient for any problem or post operative check
-Round on all your patients at the end of the day and do the following:
    Check each patient's latest vital signs, urine output, labs and imaging results
    Read the new notes from any services that are consulting on the patient
    See each patient and their nurse; clarify any new orders and answer the nurses' questions
    Determine if the patient needs any labs/ imaging for tomorrow; order the appropriate study
    If the patient is awaiting surgery, ensure that the preop checklist has been completed
    Resume all home meds when indicated
        Pay specific attention to beta blockers, insulin, prednisone, warfarin, clopidogrel

-In general, go with your gut instinct. If something seems wrong, it probably is; investigate it further and ask for help EARLY on. (Don't be the captain of a sinking ship!)
-Always assume the worst and rule out these diagnoses immediately
-Use the appropriate level of communication with your senior residents or attendings. If something is urgent or critical, DO NOT communicate this information via text message, which may not be seen for several hours. Instead, call or page them directly. Also practice closed loop communication whenever you text (if the recipient does not respond to your test, you must assume they never received the message).
-When calling your senior residents or attendings:
    Briefly summarize the problem
    Explain your diagnosis (or differential diagnosis) for the problem
    State what tests/treatments you implemented and the result
    Discuss what you would like to do next
    Write down any further recommendations you receive

Preoperative Checklist

[ ] Are there any new contraindications to the procedure?
    -Change in patient condition
    -Infection
    -Coagulopathy

[ ] Does the patient need any new labs/tests/imaging prior to the OR?
    -Generally CBC, BMP (sometimes INR)
    -Check K for all renal failure patients
    -EKG, CXR for most patients >40 years old
    -Make sure you have personally reviewed the labs/images/EKG

[ ] Are there any key medications that need to be stopped or started?
    -Beta blockers, anticoagulants (warfarin, clopidogrel, aspirin), insulin, prednisone

[ ] Is the patient NPO with IVF?

[ ] Is the patient consented? Is the consent loaded in EMR? Is there documentation somewhere in a note that details your consent discussion (specific risks/benefits of the procedure) with the patient?

[ ] Is the case booked?

[ ] Are preop orders entered?
-Preop orderset
-Antibiotics
-PRBCs, FFP, type & screen
-Only order type & cross ($600) if you anticipate needing blood in < 30 minutes

[] Have you read about the operation?

Morbidity & Mortality Conference

M&M conference is the most high yield conference for learning as a resident. Where else can you learn from the complications or mistakes of others without having to experience them yourself? (I recommend writing down one key take away point from each presentation.) Although it's great for learning, nobody enjoys presenting at M&M. Having listened to over 1,000 M&M presentations, here are a few pointers that can help you deliver a successful presentation.

First, do everything you can to minimize the number of complications or poor outcomes your patients have. In my view, the top two preventable root causes of morbidity or mortality are poor communication and performing tests or treatments before developing a differential diagnosis. Communication can be improved by documenting any important findings or significant changes in the patient's condition and by clearly discussing any potential concerns with everyone taking care of the patient early on. Although it may seem obvious (even though we don't always do it), having a good working diagnosis or differential diagnosis is arguably the most important step in managing a patient.

Second, remember that this is an educational conference, not a conference to blame and embarrass you. Therefore, design your presentation in a way that is most educational to your peers and attendings, rather than in a defensive manner (which usually results in a disaster of a presentation). Try to analyze the complication from a non-biased, outsider's view. You should always state what you would have done differently given what you know now.

Third, this is a conference seen by all of your fellow residents and attendings, thus, it is worth putting in a significant amount of time and effort to create the best presentation possible. Keep the presentation simple and focused on the complication you are discussing, but be sure to know all the details about the patient's hospital course. Find an article to back up the approach you took on your patient, or to justify an alternative approach in the future. This data will be useful to everyone listening.

Fourth, do everything you can to look and sound confident during your presentation. Again, this is a rare opportunity to present yourself to the entire surgery department. Avoid presenting in your scrubs, try to speak loudly and clearly, and minimize the use of filler words.

Surgery Study Plan

The key to any successful study plan is CONSISTENCY. If you don't learn something each day, you can go months without learning anything! Learn to harness the power of "The Compound Effect" (a great book by Darren Hardy), which states that success is not a result of the big things you do occasionally, but rather the little things you do daily. For example, the best way to get through a 1,700 page surgery textbook is to read 3 pages a day, every single day, rather than trying to read 25 pages on your one day off each week (it won't happen!). For new interns, I recommend reading 3 pages a day of *The Surgical Review* until you finish the book. Then switch over to a standard surgical textbook.

I've experimented with many different structured study routines, but the most effective one by far is the morning routine. I've read more in one year using this routine than I had in four years combined while using other study techniques. The concept is simple but backed by research: whatever you want to accomplish each day is best done in the morning BEFORE you leave for work. This is true for several reasons. First, you can't control what happens during the day, but you can control your morning. Second, willpower is highest in the morning (even if think you're not a "morning person"). The chances of you consistently reading after a 16 hour day at work is nearly zero. Third, if for some reason you miss your morning routine one day, you have the remainder of the day to squeeze it in.

I've shared my routine below (I do each activity for 5 minutes, the only exception being that I spend 15 minutes reading from a textbook). If you want to learn more about my morning routine or how to set one up, check out my blog post (http://www.mdm24x7.com/blog.html) or send me an email (tej@mdm24x7.com). I recommend that you simply start by reading a textbook for 5 minutes each morning. However, if you're not ready to start a morning routine, a weekly routine is the next best option. I followed this plan for the first few years of residency with fairly good results. Regardless of which study routine you choose, keeping track of what you study and how much you study will increase your level of accountability (see below for my weekly and daily routine templates). I write in my daily routine template every day, as soon as I complete all of the tasks listed.

When I was doing my weekly routine, I created a template that I reviewed at the end of every week. Each column represents one week and I wrote in how many times I did each activity that week. Even if you end up doing half the work on the last day of each week, it at least forces you to assess your studying habits frequently. Awareness of what you are doing is always the first step to success.

Daily routine template

	Sun	Mon	Tues	Wed	Thur	Fri	Sat
Exercise							
Meditation							
Textbook Reading							
Anatomy							
Suturing							
Article or Procedure							
Reading for self improvement							

Weekly routine template

Week (date)	Jan 1	Jan 8	Jan 15	Jan 22
Schwartz ½ Chapter				
Other reading 30 minutes				
SCORE 25 questions				
Zollinger 1 Chapter				
Article 1 article				
Laparoscopy 30 minutes				
Knot tying 30 minutes				

ABSITE Studying

This is the best technique I have created so far (I start this around mid October):

-Read/review a ½ chapter every day from *The Surgical Review*
-Do 20 SCORE or other review questions each day corresponding to the material just read
-I occasionally do a bunch of random questions not related to what I just read
-I then focus on the SCORE questions I got wrong and write down what I learned from that question. I have about 45 sheets of paper organized by topic (in the same order as Fiser's *The ABSITE Review* book). If for example, I answered a trauma question wrong, I would write the

key info on the "trauma" sheet. I periodically review these, and then thoroughly review them before the ABSITE, since this is the information I still need to solidify in my mind.
-Review the *ABSITE Killer* a few days before the test

These techniques have been working well for me, but obviously adjust them in whatever manner works best for you. The key is to have a solid plan and to start early!

Additional Learning Tips

Create an operative techniques journal where you write down at least one thing you learned from each case.

Create an "areas for improvement" (AFI) journal where you write down things you could have done better ("mistakes") each day while managing patients.

Write down at least one medically relevant lesson or fact you learned each day. This could be something you learned on rounds or something you looked up on a patient (things we should already be doing every day).

It's often said that you shouldn't scrub into a case you haven't read about, but in 2016, I would add that you shouldn't scrub in if you haven't watched the youtube video on the procedure as well. SAGES has excellent videos on almost every minimally invasive procedure that exists.

Amazon.com is a great resource for purchasing everything you need to practice suturing and knot tying at home. For less than $15, you can purchase "castros" (castroviejo needle holders) and Gerald forceps to practice creating vascular anastomoses.

Textbooks & Resources

1. *The Surgical Review* The best way to comprehensively study for the ABSITE. If you are just starting intern year, you should be able to read this entire book before you take the ABSITE for the first time. I highly encourage all 4th year medical students interested in general surgery to buy this book as well and read it at least once before starting residency – do this and you will dominate the ABSITE as an intern.

2. Once you have read *The Surgical Review*, buy one of the following general surgery textbooks (read cover to cover by the end of residency):

Schwartz's Principles of Surgery
Sabiston Textbook of Surgery
Greenfield's Surgery: Principles & Practice

3. *Current Surgical Therapy* by Cameron. Each chapter in this book is 3-5 pages on average and summarizes one specific topic. Good for a quick review of any subject.

4. *Zollinger's Atlas of Surgical Operations* If you were to buy one surgical atlas, this would be it. Each procedure is described succinctly and contains step by step drawings.

5. *Operative Dictations in General and Vascular Surgery*. If you are crunched for time or just want a simplified list of the key steps of the most common operations during residency, this book is an excellent resource.

6. Anatomy textbooks (I have three that I use almost daily):
- *Atlas of Human Anatomy* by Netter – Great for its simplistic drawings
- *Color Atlas of Anatomy* by Rohen & Yokochi – As opposed to Netter's, this book depicts actual human cadavers, sliced in various planes. The main points of anatomy are numbered with a key at the bottom of the page, which allows you to quiz yourself.
- *Cross Sectional Human Anatomy* by Dean & Herbener – This atlas shows cross sections of human cadavers, CT scans and drawings. Key points of anatomy are numbered for you to quiz yourself. I find this atlas extremely useful for thinking in three dimensions and improving your ability to read CT scans.

7. *Manual of Common Bedside Surgical Procedures.* This book describes many of the procedures you may need to perform as early as intern year (chest tubes, central lines, crycothyroidotomy). The book is inexpensive and worth having so you don't waste time googling these procedures.

8. *Review of Surgery For ABSITE and Boards*. This book is filled with tons of brief, high yield ABSITE review questions, but is also fairly comprehensive. The explanations for each answer are very clear yet succinct. Arguably the single best source for ABSITE review questions.

9. *The ABSITE Review* by Fiser. Full of high yield facts. It's good for a quick review, but I do not recommend it as a primary method to study for the ABSITE.

10. *Top Knife*. This is most relevant to those going into trauma and acute care surgery, but the principles can be applied to any field of surgery. This book teaches you how to think and manage both the patient and your team. It's a fairly quick (and entertaining) read.

11. *Safe Answers for the American Board of Surgery Certifying and Recertifying Exam*. By far the best book to help you prepare specifically for the oral boards (it's only available at www.safeanswers.org). I recommend buying this book at the beginning of your fourth year.

Success Outside The OR

One of the worst things you can do in life is to have a great career and nothing else. I believe that having a successful life depends on obtaining success in each of the following areas: health (mental & physical), relationships/family, self-improvement, financial wealth/freedom, career/legacy. Do you have goals for each of these areas and specific plans for obtaining these goals?

Tips for a successful life

1. Figure out your **definite major purpose** in life (put this in writing). Why do you exist? What are your unique gifts and how can you use these to improve the world?

2. **Reverse engineer** your life. Our outcomes are determined by our actions. Our actions are determined by our thoughts. To succeed, you must have an extremely clear idea of where you want to go. What are your goals? Get extremely specific and set deadlines for each goal. Review these every single morning.

3. Build a **mastermind team**. Don't reinvent the wheel. Find successful individuals to serve as mentors in every aspect of your life. Then copy what they did or do it better.

4. Get **uncomfortable**. All growth occurs outside of your comfort zone. Push yourself to do things that you fear doing. Maybe that's why you are in this field!

5. Don't be afraid to **fail**. Failing is necessary on the path to success. The key is to learn something new every time you fail. Then it's not called failing; it's called learning!

For more motivation check out my Instagram page @mdm24x7.

Visit www.mdm24x7.com/surgery.html for updates and my latest educational creations.

Thank you to all the residents and attendings that have helped me shape this manual into the high yield and practical product that you just read.

Thank you to the following members of my success team, who have personally assisted me on my journey and have sponsored the creation of this manual:

"Resident's Financial Success Blueprint"

Many physicians fail to attain true financial freedom. Don't be one of them! The best time to start working towards this goal is during your residency. Here are some simple steps to take as a resident:

1) Utilize Your Employer Retirement Plan (if available): Are you aware that you are eligible to develop a customized, strategically managed, risk adjusted portfolio on these monies at no direct cost to you? Additionally, some plans provide match contributions.

2) Protect Your Income: Losing your future income is arguably the single greatest risk you face. Acquiring Own Occupation disability insurance PRIOR to completion of training can be critical for myriad reasons including significant premium discounts available with multi-life & gender neutral rates. For as little as $30 per month you could implement $1,000 in monthly disability benefit with the ability to increase your benefit to $15,000 monthly benefit in the future without having to go back through the underwriting process.

3) Build Your Tax Free Bucket: While in training, your income allows you to direct contributions to a Roth IRA. Once you begin your career, your income will likely preclude you from making these contributions; it is wise to maximize this if and while you can. Note: Evaluate conversion of your Employer Sponsored Retirement plan to a Roth IRA in the year you complete training.

4) Develop a Debt Elimination Plan: Integrate Emotional Sensitivity & Financial Sensibility such that you are aware of all your options, including loan consolidation and loan forgiveness programs. With informed guidance and an educated and disciplined approach, a debt elimination plan can help you achieve your goals more quickly.

5) Build Your Financial Mastermind Team: During your surgical education, attendings from a variety of surgical specialties help you master the skills and knowledge you need to succeed. Your finances should be no different. Start to build your team of trusted financial advisors, accountants and attorneys today.

Learn about our interactive wealth management platform at www.mosaicfa.com
Review our educational videos at www.mosaicfa.com/Education-Videos.8.htm

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