Year Out Handbook/Student Advice

Planning Guide

If you are a Penn medical student, who is considering taking a year out from Med School, here are a couple of things for you to think about and be aware of:

NOTIFICATION

Once you have decided to take a year out, please notify the PSOM Registrar. You will need to complete paperwork to formally register for the year out and extend your graduation date.

ELECTIVE AND SUB-I SCHEDULING

Be sure to contact the PSOM Registrar as early as possible to work through scheduling your electives and sub-I around the timing of your year out.

5TH YEAR REQUIREMENTS

For the typical year out student, in your 5th year of medical school you will need to complete 3 weeks of Frontiers (offered in October, February, March), one week of Bioethics (only offered in February), and minimum of 4 weeks of a clinical rotation (which can include a 2-week elective + 2-week elective).

5TH YEAR REGISTRATION

In your 5th year of medical school, you will be required to register for a minimum of 2 months each semester of some activity. This can include electives, Frontiers, Bioethics week, elective research, etc.

SCHOLARLY PURSUIT

If you are conducting a research project during your year out, then you will likely want your year out research project to count as your **Scholarly Pursuit** project. If so, you will need to complete the Scholarly Pursuit paperwork from the Registrar's office.

STEP 2 TIMING

There are mixed opinions as to whether students are better off taking STEP 2 before or after their year out. In some cases, students have felt that it is better to take STEP 2 before,

when your knowledge and skills are at a peak, and you can "just get it over with". In other cases, students have felt it was better to take after, so they can choose whether to include the score on their residency application, and they can refresh their skills before starting residency. It is up to each student to decide for themselves.

CREDIT

Students typically receive up to 5 credits towards graduation requirements. The rest of the year counts towards enrollment requirements.

FEES

During a year out, students will be charged a general fee, technology fee, clinical fee, disability fee, and health insurance (if applicable). Paying fees maintains your full-time student status.

FINANCIAL AID

Prior year loans are eligible for deferment as a full-time student. Direct loans may be available to assist in covering fees, health insurance and living expenses.

GLOBAL HEALTH EXPERIENCE

If you are considering a global health year out experience, contact **The Center for Global Health** for more information.

QUESTIONS?

- Registration or scheduling, contact the **Registrar's Office**
- Financial Aid, contact **Michael Sabara**, Financial Aid Office
- Year out research opportunities, contact **Francia Portacio**, Combined Degree Office

Year Out Research Student Advice

Many Penn medical students have conducted elective year out research projects over the years. Here is a sampling of some of the advice (via direct quotes) they've had for students who are considering pursuing an elective year out research project:

TIMING OF YEAR OUT

- I had to start about one year in advance planning, finding mentors, and beginning the application process.
- I would wait to start the year out after you've completed the clerkships, your sub-I, at least one elective, and Step 2CS. (You want to do the last 3 immediately after your clerkships, so you don't forget all the stuff you learned!)
- Talk to your departmental advisor about requirements you should fulfill before/after your year out. For example, I was advised by a few people to take a relatively intensive rotation after returning from my year off prior to applying (to show program directors that your clinical skills are still up to par). Since the last rotation block to get an eval from before your letters go out is August, I decided to end my year off prior to that.
- I would recommend you start your year out by at least August, so that you have a couple of months when you get back in your 4th year to finish putting together your residency application (more applicable if your year out is outside of Penn)
- I liked starting an earlier year out (May), so I could do a couple electives right before applying and liked how this worked out.
- Be aware of graduation requirements when choosing and timing electives and licensing exams.
- It may be a good idea to start reading papers from your research area prior to your official start date, so that you can hit the ground running when you start.

FINDING A MENTOR

- Start early looking for a mentor - whether it's for career advice, planning research, planning a year out, or maintaining work-life balance.
- Identify people through your clinical rotations (i.e., attendings, fellows, residents).
- You could think back to who gave you lectures during Mod2 or clerkship year that you found especially interesting and contact them.
- Talk to other graduate students or post-docs who work with this mentor. Is he/she a good person to work with?
- Talk to upperclassmen who have done research in your field of interest and ask who they considered for a mentor and why he/she picked a specific one.
- Reach out to people who have done the year-out before. Ask them how productive they were, what was good, what was bad, and what they would do differently. What do they wish they would've known when they were in your shoes?
- The difficulty of finding a mentor depends on your field of interest (some fields are more research heavy than others) and how specific you are about your own research interests. Definitely start this process as early as possible as it may take some time to set up

meetings and form a plan with your chosen mentor. Talk to your departmental advisor about who in the department is active in research, then try to set up meetings with those individuals if their interests match yours. Peruse Penn Med's research site to find mentors who have supervised students in the past (e.g., look at the fellowship sites (HHMI, Focus Fellowship, etc.) to see past mentors).

- The Emergency Department occasionally hosts events where attendings give brief presentations about their ongoing research, which I found very helpful to start getting a picture of who my interests might align with. I also found it useful to just PubMed search articles attendings have published (both as a way of learning more about what they do, but also to give you something to talk about when you approach them regarding your year out). I would say though that perhaps just as important as whether you're interested in what they do is whether you get along with the attending. Keep in mind any rotations you have had/small group sessions etc. where you've worked with an attending that you really got along with and find out what type of research if any they have going on.
- It is helpful to have a mentor who has strong research funding (NIH, HHMI, etc.) but who is young enough that he or she can relate to your experience as a student and is invested in helping you grow.
- This is probably the most important step of your year out. Make sure you ask good questions before committing to working with someone. For me, this was "how much autonomy will I have in my project? Can I design my own projects? What level of authorship can I expect (first author? second?)? How flexible is my time commitment, and can I possibly work with other mentors on smaller projects?"
- Find a field that interests you first, then meet with multiple mentors in that field. Ask about publication potential, opportunities to write and present, and whether they have students who they have worked with in the past that can provide insight. A promising mentor will answer these questions and connect you with students readily.
- 1) Don't be afraid to email or reach out to people who you have never met. 2) The quality of your mentor/mentee relationship is more important than the quality of your project 3) It is ok to meet with someone to learn more about them and their work and then not decide to work with them.
- I think the most important thing is that you have to be passionate about the work that they do, and you have to be a good personality fit. If you are doing a research year out, other things to look at are the productivity of the mentor (including quality of journals that they publish in) and their experience mentoring students in the past.
- Find someone who will be available to help you. If you're doing lab work, many PI's will be too busy to interact with you on a daily basis, and you'll be working more with a post-doc. Try to find a PI that is interested in mentoring and will be able to work with you directly.
- Mentorship is important. Try to find a program where your confident people will have time to work with you. Face time is important, too! Try to set expectations/ground rules, including the need for weekly or bi-weekly in-person meetings.
- Find someone who is both prolific and has some pull with your residency of interest, and of course is someone you can hopefully build a strong mentoring relationship with.
- Don't be afraid to be (politely) persistent when contacting a potential mentor. Oftentimes these people are very busy. I ended up having a very wonderful relationship with my research mentor, and she was always extremely responsive to my emails once we were

working together, but I initially had to email her a few times to set up our first meeting. I am very glad that I didn't give up. Also, in choosing research experiences in general, I have found that I have had better experiences when I've chosen a project based more on what my potential role might be, or the mentor's enthusiasm for my involvement, than based on a pre-conceived idea I had about what exactly I wanted to study. It is good to have interests but keep an open mind. I think that a project where you have an exciting role but is maybe not exactly your niche interest will be more rewarding than you trying to force a project based on what you think you want to research.

- If you end up in a situation with multiple mentors (i.e., one at Penn and one outside of Penn, or working on multiple projects each with own mentor), make sure you have made it clear exactly how you will be splitting your time and effort.

FINDING FUNDING

- The best way to be successful at this is to start early, i.e., the fall before you take the year out. Decide what type of project you are interested in, as these days, most grants are specialty and/or topic dependent. The earliest deadlines are in January, but if you decide late, there are still opportunities.
- Start early. Pay attention to emails from research office. Pay close attention to submission dates. Apply to multiple programs if applicable.
- Go to the year-out info session.
- I would check out the year-out website and look at the options there. Some PIs may have their own funds that you can ask about, but it's helpful to have a couple funding options you can bring up before meeting with a potential mentor.
- Pursue funding and mentorship at the same time. Your eventual mentor (or nice people that you meet on the way to finding your mentor) can often be the best place to find otherwise unknowable sources of funding.
- Don't be afraid to ask potential mentors if they can pay you from internal funding. Grant money is tight these days, it's true, but it could very well be the case that they have some money tucked away for a full-time hire that they could give to you instead…
- Plan early, but don't be disappointed if you can't get any funding (this will be highly dependent on your area of research.). More important than finding funding is finding a good mentor and project. This is what will determine your happiness in your year out -- how much you like your project/lab, can get good career advice from your mentor, and a stellar recommendation for residency. Finding funding and a great mentor is the ideal combo, but I wouldn't sign up with someone solely because it pays well.
- I was lucky that the department I was working for had funding for a research fellow for a year. This can be an awkward conversation to broach with mentors when you first meet them, but it's important to ask anyways and mentors should feel prepared/comfortable discussing it with you.
- For those that decide on a year out late in the game (after application deadlines etc.) like me, a route that might be available is to find an attending who has need of a research assistant type position. I was able to get paid to work part-time as a research assistant (a fair bit of study upkeep and logistical work) in order to also have time to work on projects of my own design.

- If you can't find funding, "Remember that you are still eligible to take out the full cost of living as loans as you will still be enrolled in the medical school, although this is of course the least ideal scenario."

DECIDING BETWEEN YEAR OUT RESEARCH PROGRAM AND MD/MASTER'S PROGRAM

- If you are considering a competitive field, research can look great on the resume and can help an otherwise "middle of the pack" applicant stands out more.
- Give close thought to the year out programs as they can help provide structure to your year, making them more productive.
- I did my year out to see whether I would like the research process and to give myself the opportunity to explore another interest I had cultivated throughout the first 3 years of med school. (It was also a great chance to get a bit of breathing room from the stressful hospital environment.) I think the MTR and MSCE are more geared toward people who already know they want a career that is research-based (at least in part).
- I did HHMI Med Fellows (for two years), so I am biased. Masters degrees are great, but publications are better, especially if you are seeking a faculty position out of residency. No one cares (at least not yet...the tides may change) if you have a Masters degree, but they definitely like to see first author publications in strong journals. Again, I am biased, and my perspective is based on interactions with people who have chosen a similar path!
- HHMI, Sarnoff, NIH, and other similar year-out programs are thought to have better name recognition at the national level than some of the Penn-specific master's programs. They also have an extensive alumni network that may be useful as your career continues to develop. That being said, productivity is far more important than the name of the program. Quite frankly, if you take advantage of the opportunities you're given, you will significantly improve your candidacy for residency positions and beyond.
- They're both good options- just know what you want to do with the Masters before you get involved. You could always do the combined degree and a little research if you're so ambitious. The advantage to focusing on research may be that you have more time and flexibility to write papers and present at conferences.
- This really depends on your goals for your year-out. If you want a flexible schedule where you can possibly TA and take small electives here and there, then a time-intensive MD/Masters is probably not for you. Most importantly, talk to students that have done these masters programs to find out about their time commitment and program info.
- It depends on what you want to get out of the year. Masters programs are great in that you get a second degree, but you have to pay tuition (or not) and I think that in general you are less productive than taking a year purely for research. I wanted to use my year out to determine if clinical research was something that I liked enough to make a part of my career, and I don't think I would have gotten a good sense for that if I was also getting a Masters degree, even if I was involved in a few research projects on the side.
- Really think about whether the degree will give you any benefit - the funding amount is usually comparable between research and degree programs, however degree programs there is a lot of extra work associated (such as attending classes, writing a thesis, defending thesis) - and a lot of that will happen at the end of your year when you are graduating and may not want to be working on that.
- Many of the masters programs provide more training and funding than independent year out programs. I highly recommend them.

- I think it makes a lot of sense to do a masters, but it's expensive so you have to weigh that. You can often get a masters paid for later on, but you won't have the growing repertoire of skills to apply to your research year out.
- Talk to someone in the financial aid department of these programs to decide if the additional costs of the Master's degree are personally worth it to you. Consider that many residency programs and faculty positions will pay for classes and/or degrees that they think will make for more productive clinical scientists and therefore you could potentially get this degree for free later.
- Ask yourself if the masters is going to be beneficial for your career.
- It's always nice to have an extra degree. Is it something that will help you? Do you want to be a clinician scientist? Or, do you just want to be exposed to research so that in the future, if you want to do some sort of research study in your practice, you'll be familiar with the process?

SETTING GOALS AND EXPECTATIONS WITH YOUR MENTOR

- Creating and implementing clear goals is the key to success in any research opportunity, and I believe the **SMART Goals** framework is an excellent way to get started. This guidepost really allows you to think through what you want to achieve in a manner that keeps both you AND your mentor accountable to a timeline.
- Make sure to let your mentor know your goals for the year and ask him/her for a clear set of expectations, so that this awkward but important conversation takes place right up front.
- It's best to be upfront about this, which can be difficult, but it's important for your professional development.
- Talk authorship early on. Find mentors who cultivate a cooperative environment within their laboratory spaces and who encourage members of their labs to work on multiple projects, each with its own lead. This maximizes your chances for publications (even if you're second author on some of them).
- It is specific to the mentor and your relationship with them. However, at least ask what they consider a reasonable output to be for the year and look at their track record over the last few years. Also talk to anyone who has previously worked for them.
- Find this out early and be detailed oriented. Find out when the scientific conferences are that year and when you need to submit an abstract by. Then determine with your mentor if there are projects that can be completed by those deadlines. You ideally want to submit abstracts as early as possible, so that you can have publications to add to your CV.
- Make sure your mentor is aware of a limited time frame from the very beginning. Don't let them forget. Try to make the project your own.
- I think it's helpful to have an initial meeting before you get started about expectations and goals for the year out. That being said, timelines change, and other projects come up, so having regular meetings with your mentor can help adjust the initial timeline and expectations.
- Ideally these are conversations that you can have upfront when you're having your preliminary discussions about potentially joining a lab for a year. However, given the nature of the imbalance in the mentor-mentee relationship, and given the other difficult topics that are also discussed in these conversations (e.g., internal funding possibilities),

it's understandable that you may not feel comfortable talking about timelines, authorship, etc. But if this is the case, be prepared to be flexible later on down the road…

- Establish this from day 1 as you meet with potential mentors. You should be first author on your main projects, and you should make sure this is the case. If a fellow or resident is co-author with you on a project this may not be the case, so just make sure to feel out the situation with minimal awkwardness. Establish from day 1 how often you would meet, especially for clinically oriented faculty that may get busy and fall behind in their research. You don't want to not be productive because you did not properly plan.
- Find out how much previous people in your position were able to accomplish.
- It's also helpful to have several things going on, so that if one person or one project does fall through, you've got other things in the works.
- This is something to prioritize before/at the start of your year off. I don't think I was clear enough with my mentor about my goals of having independent projects and authorship. As a result, I felt like I didn't get as much accomplished as I had hoped. This can be an uncomfortable conversation to have with your mentor, but I think it's crucial to discuss it. Additionally, your mentor should know that publishing papers/posters/presentations is critical to resume building and applications.
- Always discuss authorship up front. My mentors always said that any project I work on with them will have me as first author, them as corresponding author. If multiple people are involved, determine authorship at the first meeting to avoid problems later. Timeline should be open and amenable to change depending on other studies you are involved in. It's better to estimate a longer timeline and surprise them with early results.
- Just be very clear and upfront as early on in the process as possible. It can be awkward, but it will save you a lot of discomfort and disappointment down the road. Don't be afraid to say, 'Can we sit down to touch base about my goals for this year?', and when discussing projects don't be afraid to say, 'I am excited to help with this project. Will I get authorship credit?'. Usually they will say 'yes of course' and it will prompt a discussion of who, if anyone, will come before you. It is very discouraging to do the lion share of a project and then have a fellow come out of the woodwork and claim your spot. Communicate early!
- If you are doing any type of clinical research, it is reasonable to have publications after a year - this is truer if the database is already created / IRBs are approved. If you need IRBs, try to get those approved before the year out actually starts, so you can hit the ground running. For basic science, it completely depends on the project, how far along the project is before you join, etc.
- Different areas of science have different rates of publishing. Clinical is a bit more proliferative than basic science.
- Publishing takes much longer than I had imagined.

INTERNATIONAL RESEARCH

- To find a mentor internationally, you have to send many emails and expect a lot of people not to respond. But don't give up and hopefully someone will be willing to take you on.
- Do not forget to have fun and travel around during your global year! You are there to work and learn about research in a global context, but it is also important to remember that fully exploring your research site/country will only add to your experience and help give you better insight into the people and population with which you are collaborating!

- For guidance on finding funding for a global health year out of research, check out the **med student guidance**.

MISCELLANEOUS

- I was worried a bit about returning to electives, since it had been quite a while since I had performed a history and physical exam. This turned out not to be a problem and was something I really should not have worried about.
- Attend a professional conference early and go to all the talks that are involved in your general area of research. This is a great way to formulate ideas for new projects that you can propose to your mentor, and this gives you a good shot at being lead author. It is highly dependent on your mentor, but the more initiative you take, the more autonomy you will have on your projects, and the more likely you will have a first authored paper. Most importantly, you will be a lot more satisfied with your research, as your project becomes your baby.
- I would recommend doing both clinical and basic science research. Basic science research can take longer to complete, and you may not realistically have a publication by the end of your year. Doing a couple clinical projects can get you quick abstracts and a couple publications even. It's not unrealistic to aim for 2-3 publications by the end of your year out if you multi-task in different areas. The caveat to this is that you shouldn't overextend yourself, committing to a project that you cannot 100% complete it. Not following through on commitments reflects very poorly on you.
- Most importantly, enjoy your year! Do all the things that you didn't get to do on rotations and may not have time for in residency -- traveling, getting outdoors, hanging out, hobbies, etc. This is a great time to relax and have fun without clinical pressures!
- Take the year out--best decision I ever made! I don't know anyone who took a year out (for research, for global health work, for a master's degree, etc.) who didn't absolutely love it!
- Don't be afraid to leave Penn for your year-out. Look into the MRSP program at NIH and the HHMI Med Fellows program at other institutions.
- Students have a lot of reasons for taking a year out to do research, and make sure that whatever your reason is, that it is a good one! I haven't met anyone who outwardly regrets taking a year out, but it can be bittersweet to watch your class move on to residency without you.
- You don't need a research background (at all) to get year out funding.
- Step 2 CS, I'd recommend taking it before the year out. I did not. I have to return to rotations and then take Step 2 CS. I remember nothing! Especially since right after Step 1 you're so smart, taking Step 2 should be cake then.
- Taking Step 2 CK is a big question. Taking it closer to your clerkships (before your year out) might help because you haven't lost too much knowledge. However, if you've done really well on Step 1, delaying Step 2 CK as much as possible (after the year out) might be in your interest. This decision causes some headache, but it really should be made on an individual basis. Take Step 2 CS whenever. Before, during, or after your year out. It's not a big deal.
- Although this shouldn't be your top issue, consider compensation for the year. Some programs are unpaid, some have stipends that amount to living expenses, some pay decently well. Ask if they provide health insurance, too.

- Ask about publication potential… it's important for you to know how much production to expect. Also, ask about opportunities to travel to conferences, present at meetings, etc. Will the program pay for you to do this?
- Consider how flexible your hours will be. If you take a position that is more akin to a research coordinator, you may not have very flexible hours. More flexibility is a good thing, generally!
- Have fun!