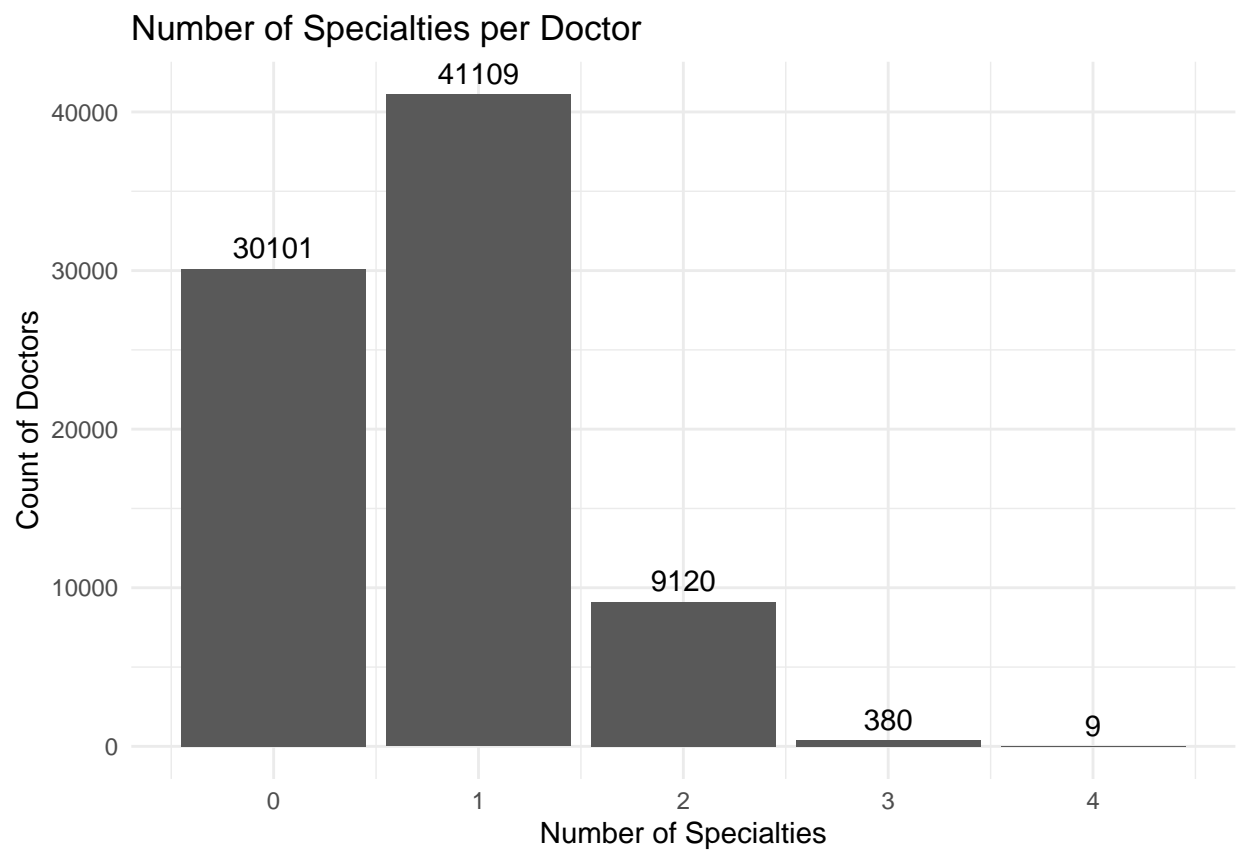


Canadian Doctors Iterations 3

```
## [1] "cpso" "name"  
## [3] "active_member" "corporation_date"  
## [5] "expired_date" "left_corporation"  
## [7] "expired_corporation_date" "specialties"  
## [9] "specialties_2" "specialties_3"  
## [11] "specialties_4" "educ"  
## [13] "educ_year"
```

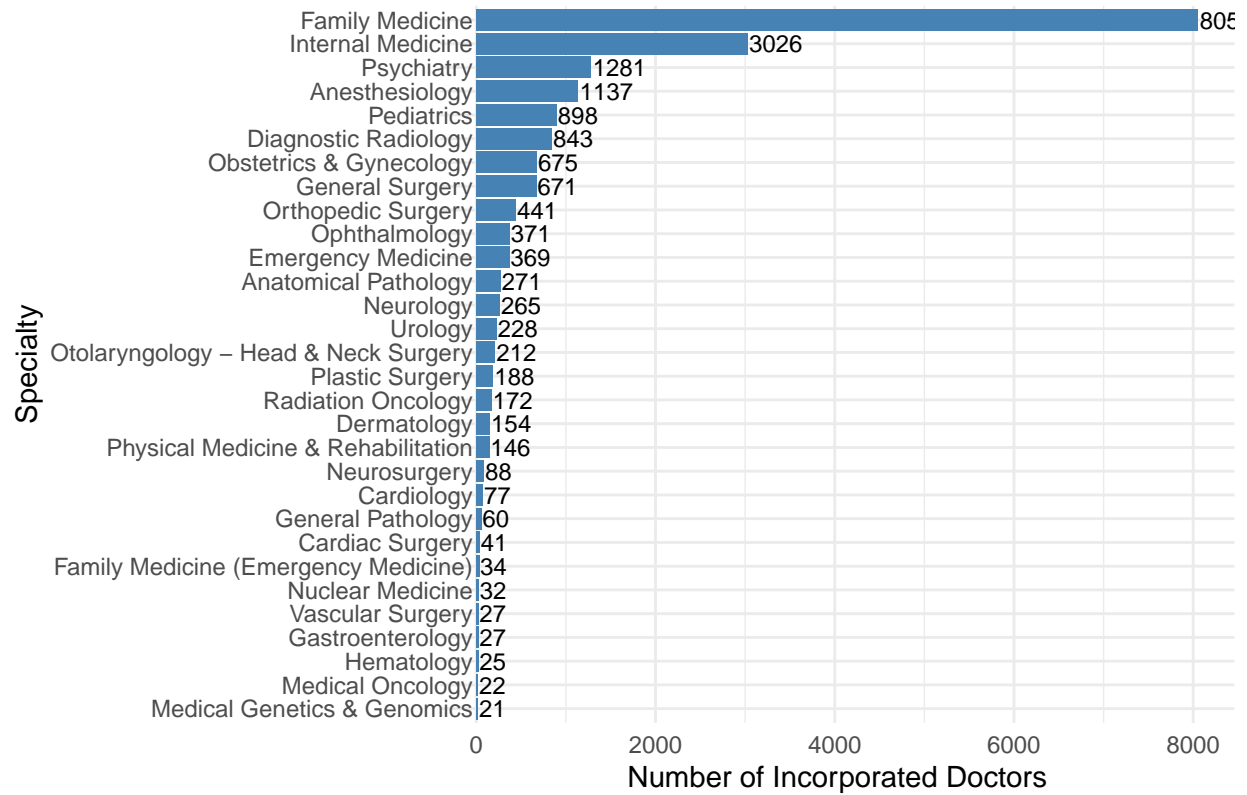
```
## [1] 41913
```

```
## [1] 38846
```



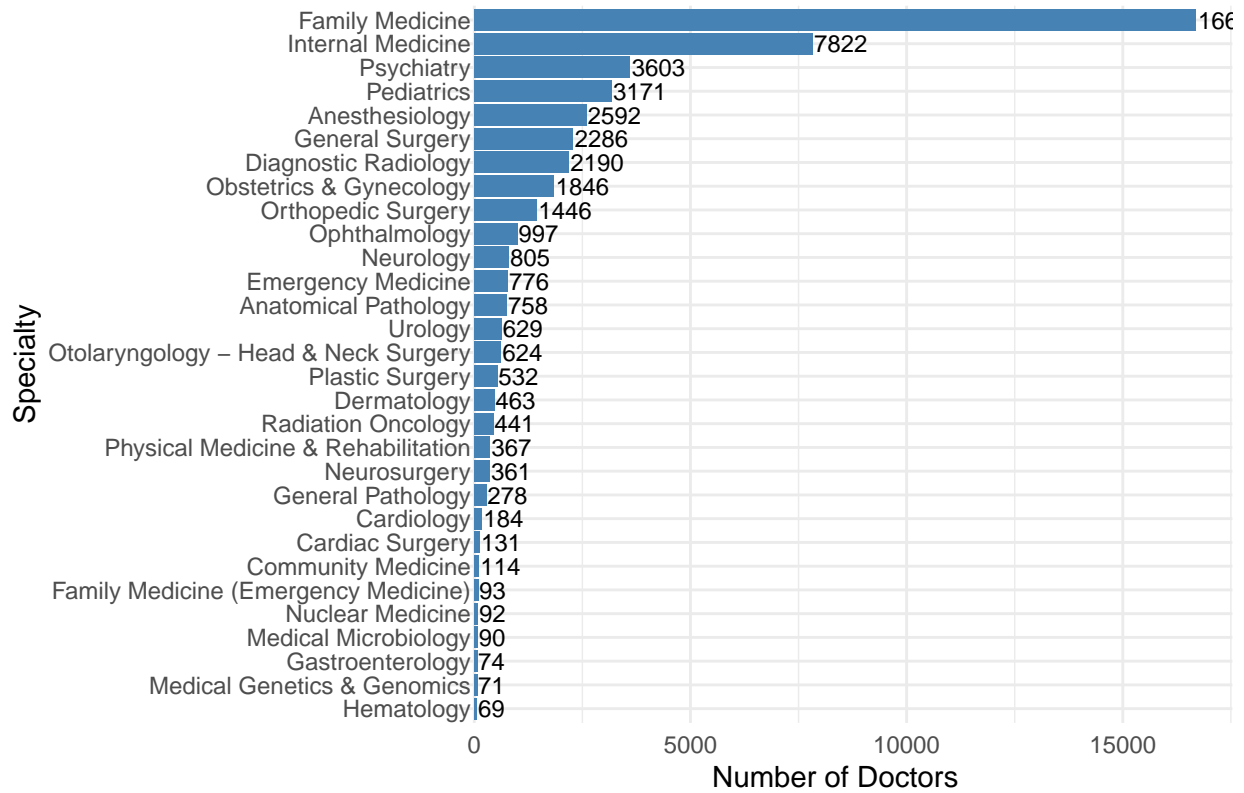
Zero is NA effectively.

Top 30 Specialties with Incorporated Doctors



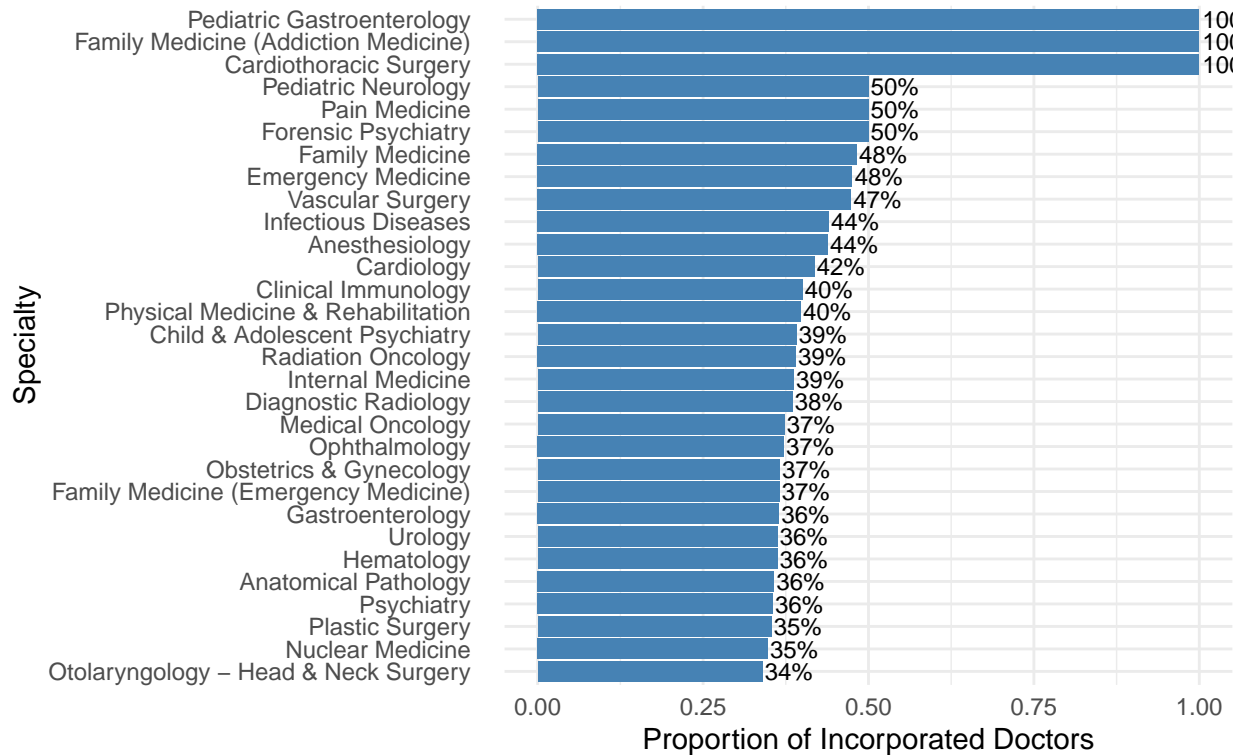
Family Medicine count is cut off, the value is 8,428

Top 30 Specialties (All Doctors)



The count for Family Medicine is 16,699. It seems that the top 30 specialties look pretty similar, incorporated or not.

Top 30 Specialties by Proportion of Incorporated Doctors



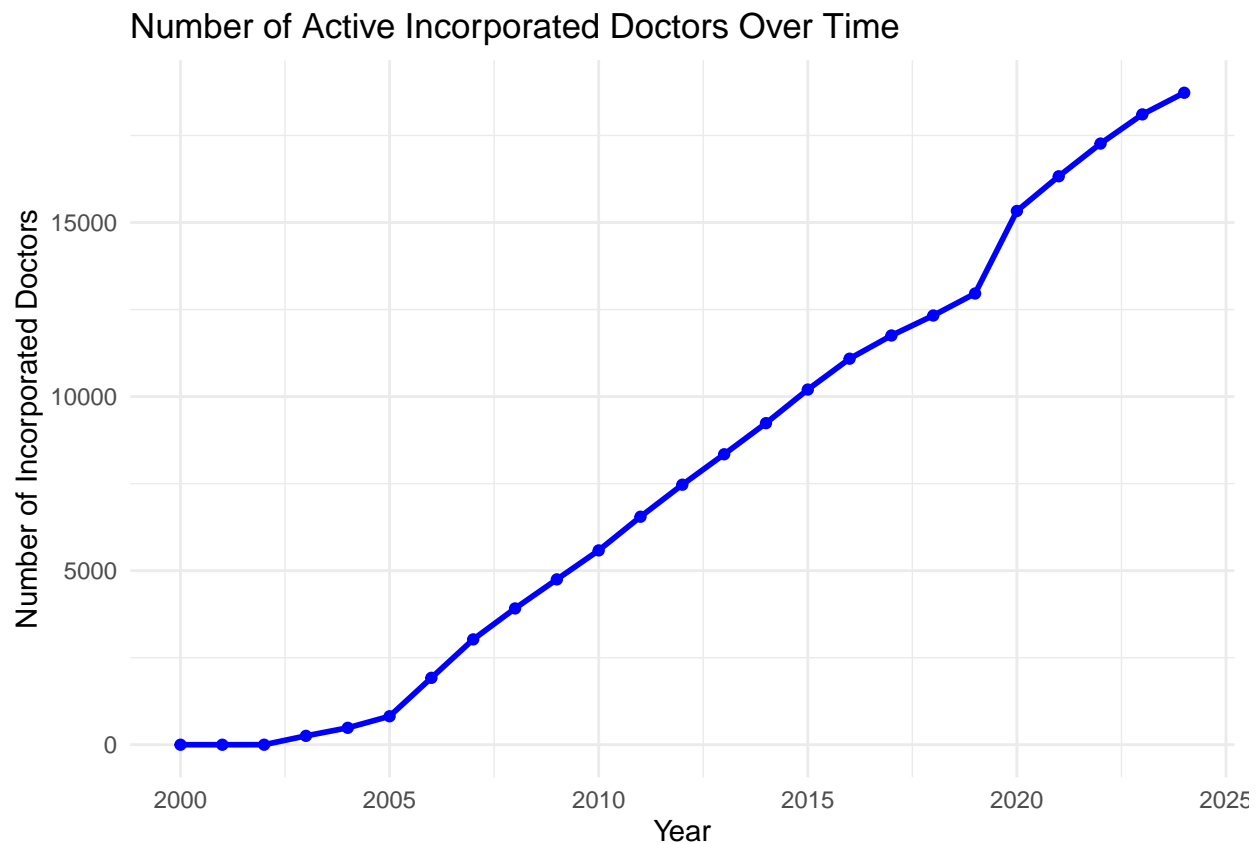
The top 5 specialties by proportion is due to how few doctors have these specialties. Addiction medicine, Pediatric Gastroenterology, and Cardiothoracic Surgery have 1, 1, 3 doctors practicing those specialties; they just all happen to be incorporated. Vascular surgery has 57 doctors and 28 of the are incorporated. Lastly, Family medicine has a total of 16,699 doctors, and 8,428 are incorporated.

specialties	num_doctors	incorporation_rate
Family Medicine	8056	48.2%
Internal Medicine	3026	38.7%
Psychiatry	1281	35.6%
Anesthesiology	1137	43.9%
Diagnostic Radiology	843	38.5%
Obstetrics & Gynecology	675	36.6%
Ophthalmology	371	37.2%
Emergency Medicine	369	47.6%
Anatomical Pathology	271	35.8%
Urology	228	36.2%
Otolaryngology - Head & Neck Surgery	212	34.0%
Plastic Surgery	188	35.3%
Radiation Oncology	172	39.0%
Physical Medicine & Rehabilitation	146	39.8%
Cardiology	77	41.8%
Family Medicine (Emergency Medicine)	34	36.6%
Nuclear Medicine	32	34.8%
Gastroenterology	27	36.5%
Hematology	25	36.2%
Medical Oncology	22	37.3%

specialties	num_doctors	incorporation_rate
Vascular Surgery	27	47.4%
Infectious Diseases	11	44.0%
Child & Adolescent Psychiatry	9	39.1%
Clinical Immunology	4	40.0%
Pain Medicine	3	50.0%
Forensic Psychiatry	2	50.0%
Cardiothoracic Surgery	3	100.0%
Pediatric Neurology	1	50.0%
Family Medicine (Addiction Medicine)	1	100.0%
Pediatric Gastroenterology	1	100.0%

```
## [1] "No good year to choose for this many rows: 859"
```

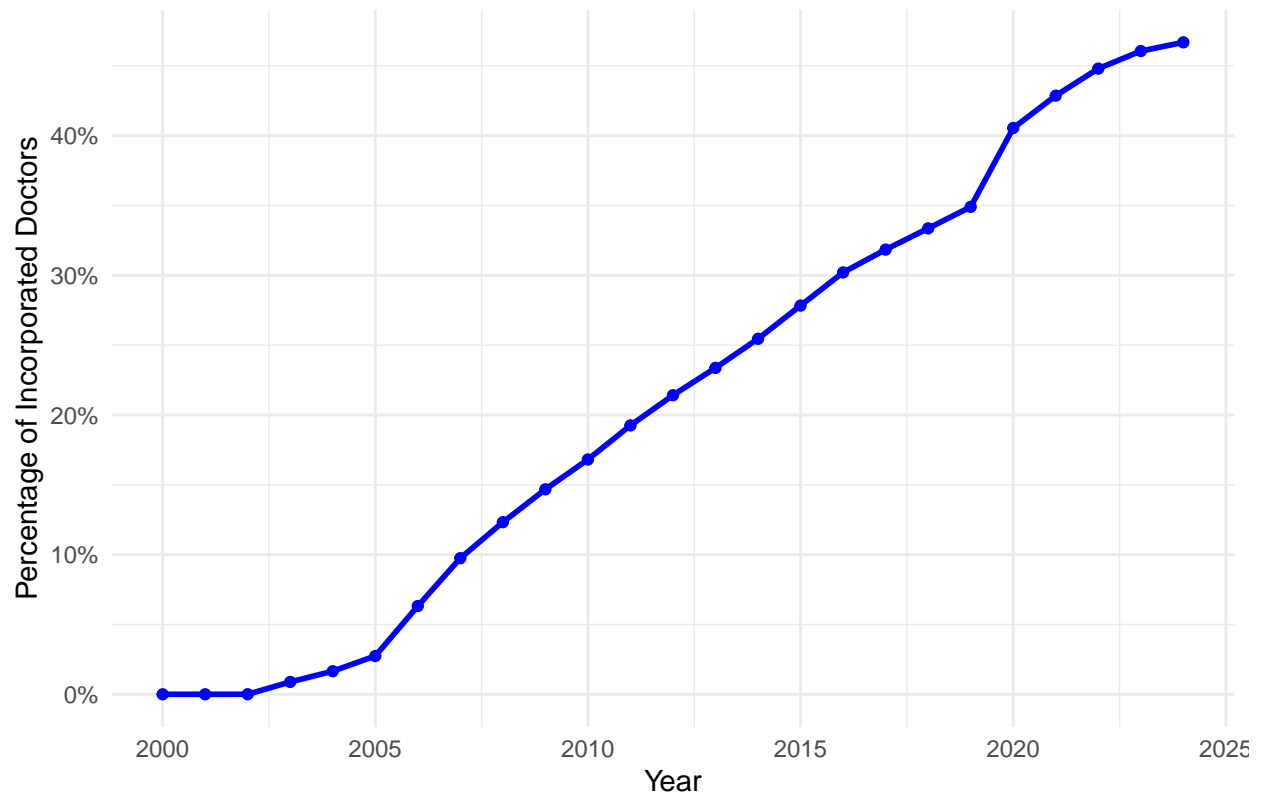
```
## [1] 18727
```



I fixed the start of the graph to be 5 years before the first year of incorporation, the first incorporation was 2002 with one, and 2003 had 239 new incorporations.

This graph is missing any doctors that were incorporated but are no longer active. So there is never any decrease in the number of incorporated doctors. So if a doctor was incorporated in 2005 and retired in 2020, they would have never shown up in the graph at all.

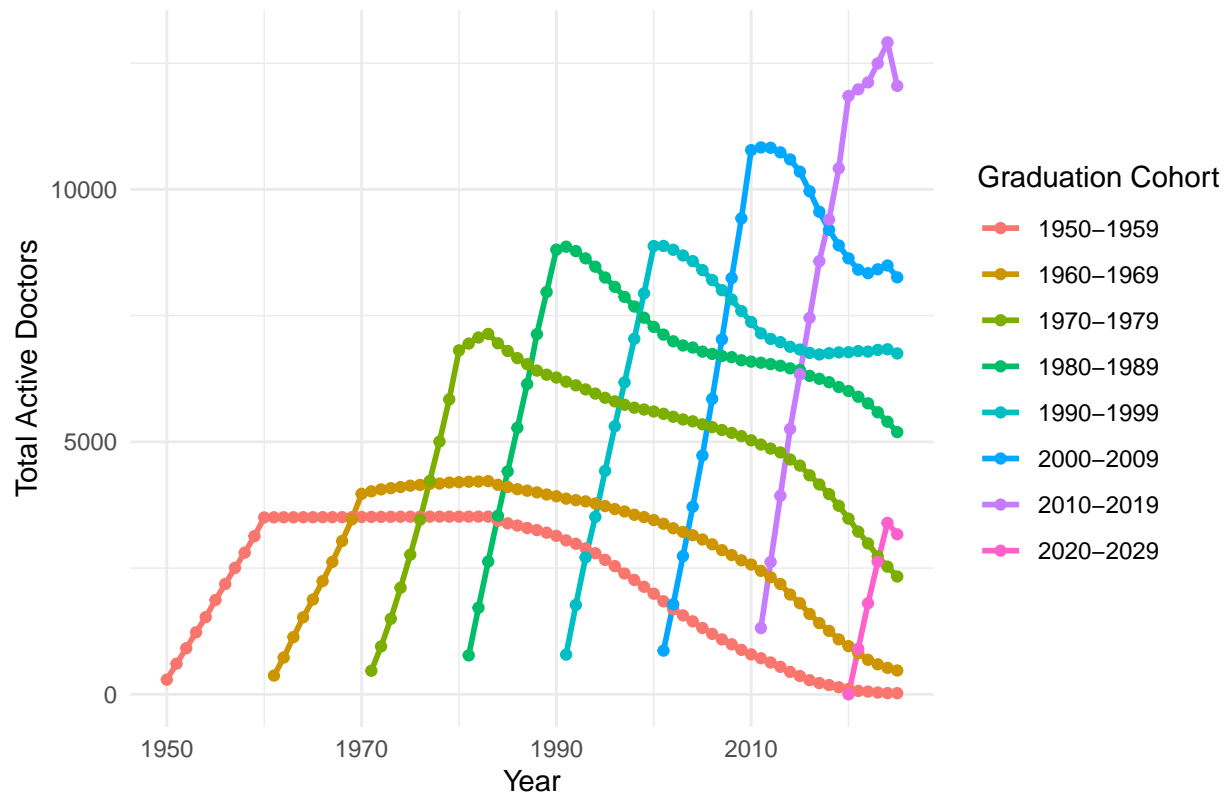
The Proportion of All Doctors That are Incorporated



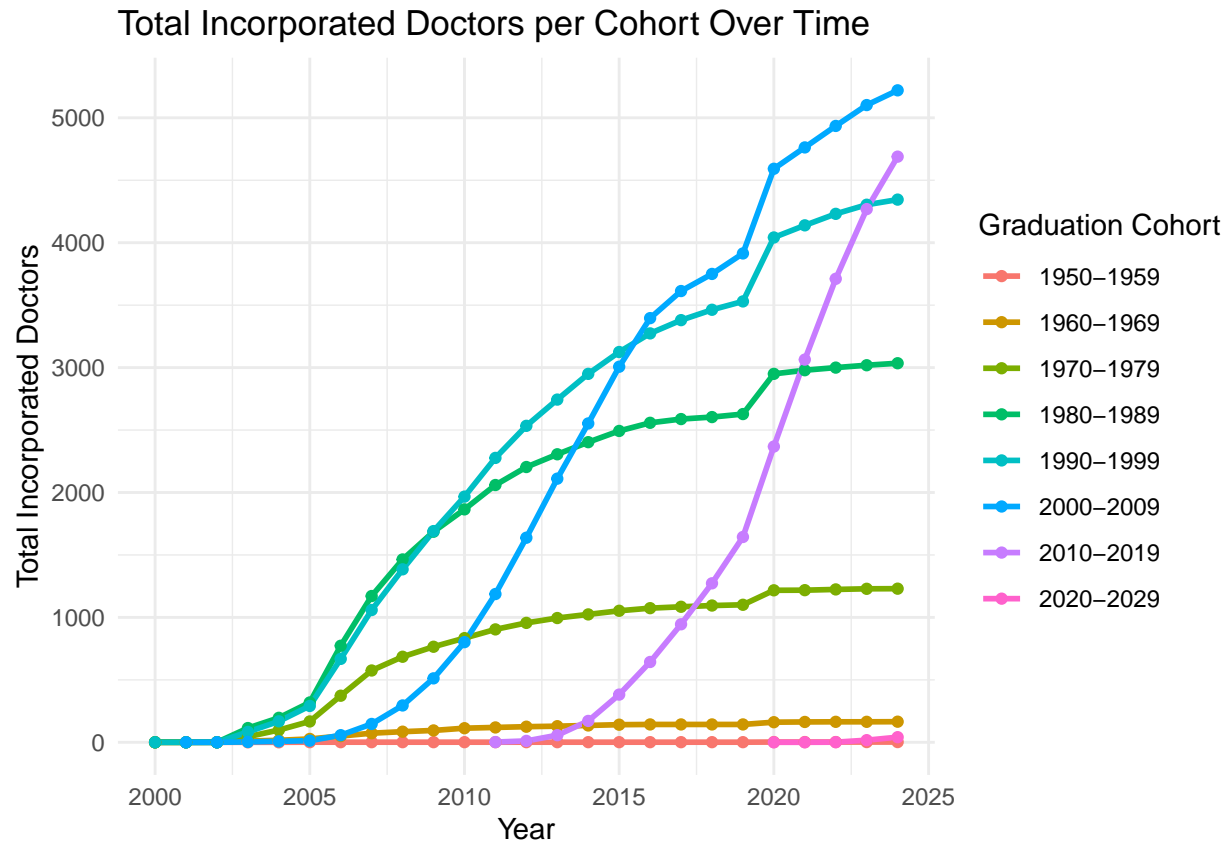
The doctors that are listed as inactive are missing data for when they incorporated, but do include when they corporation status expired. Doctors will either have a listed incorporation date or an expiration date for their corporation status, but not both.

The problem persists of missing historic data with inactive doctors and their missing data.

Total Active Doctors per Cohort Over Time

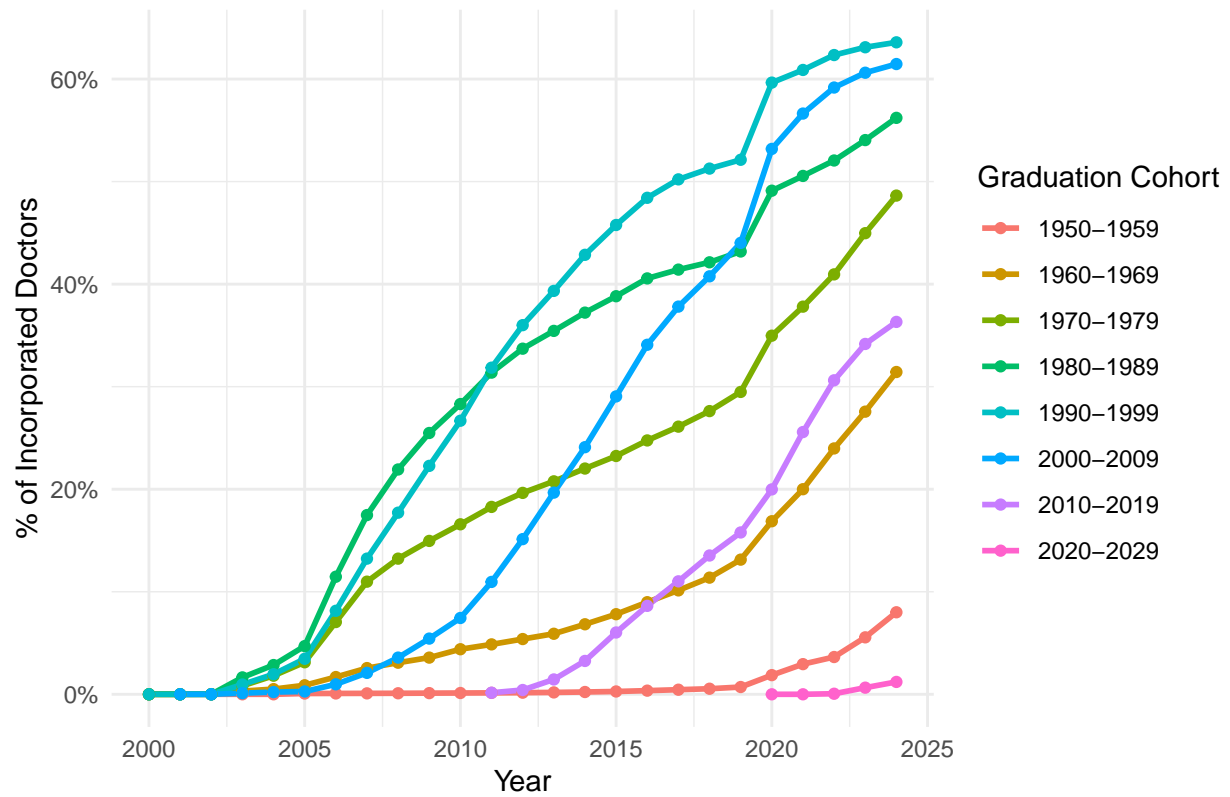


There is data for when doctors became active, either explicitly through doctors that are active and have a listed year for when they became active or implicitly by using the year they graduated med school for inactive doctors. This is what I would expect the incorporation by cohorts to look like if there were solid start and end dates for incorporation.



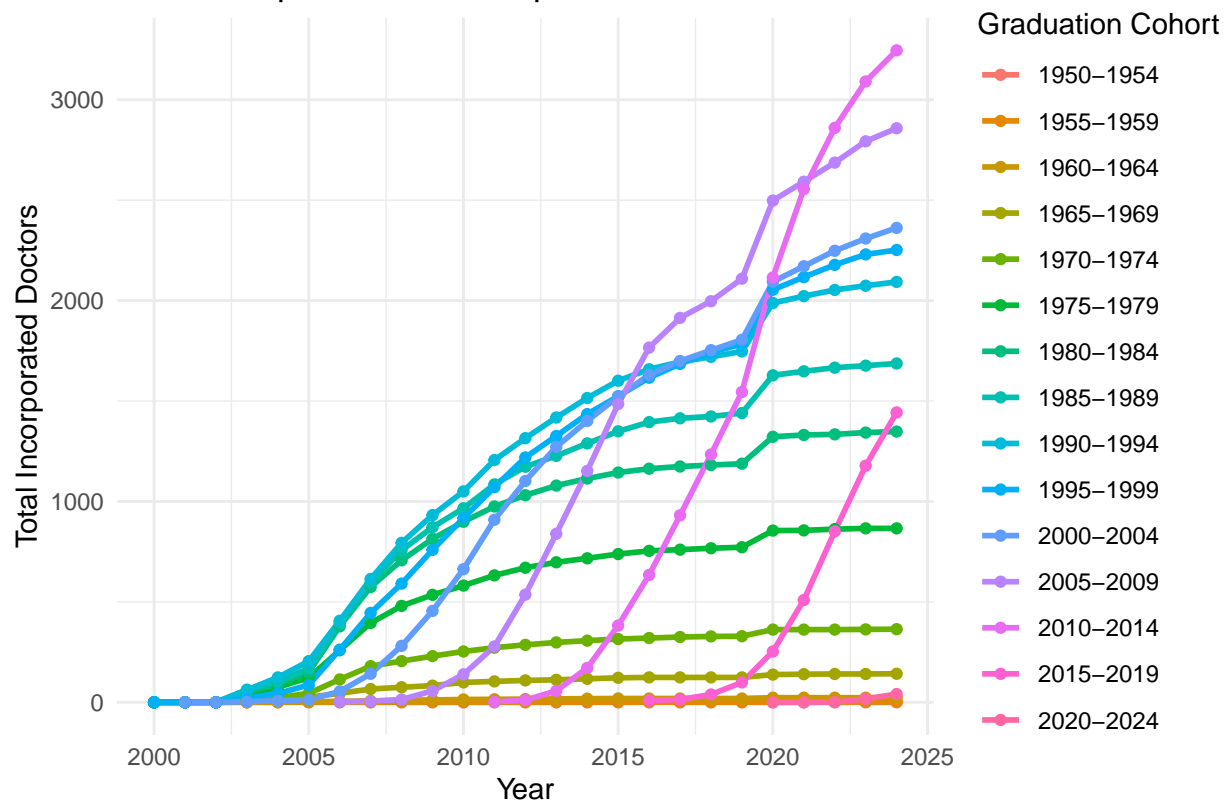
I set the graph to start in 2000, 2 years before the first incorporation. Some doctors have an incorporation date before they graduated med school, this is likely due to them joining an already incorporated practice.

Proportion of Incorporated Doctors per Active Cohort Over Time

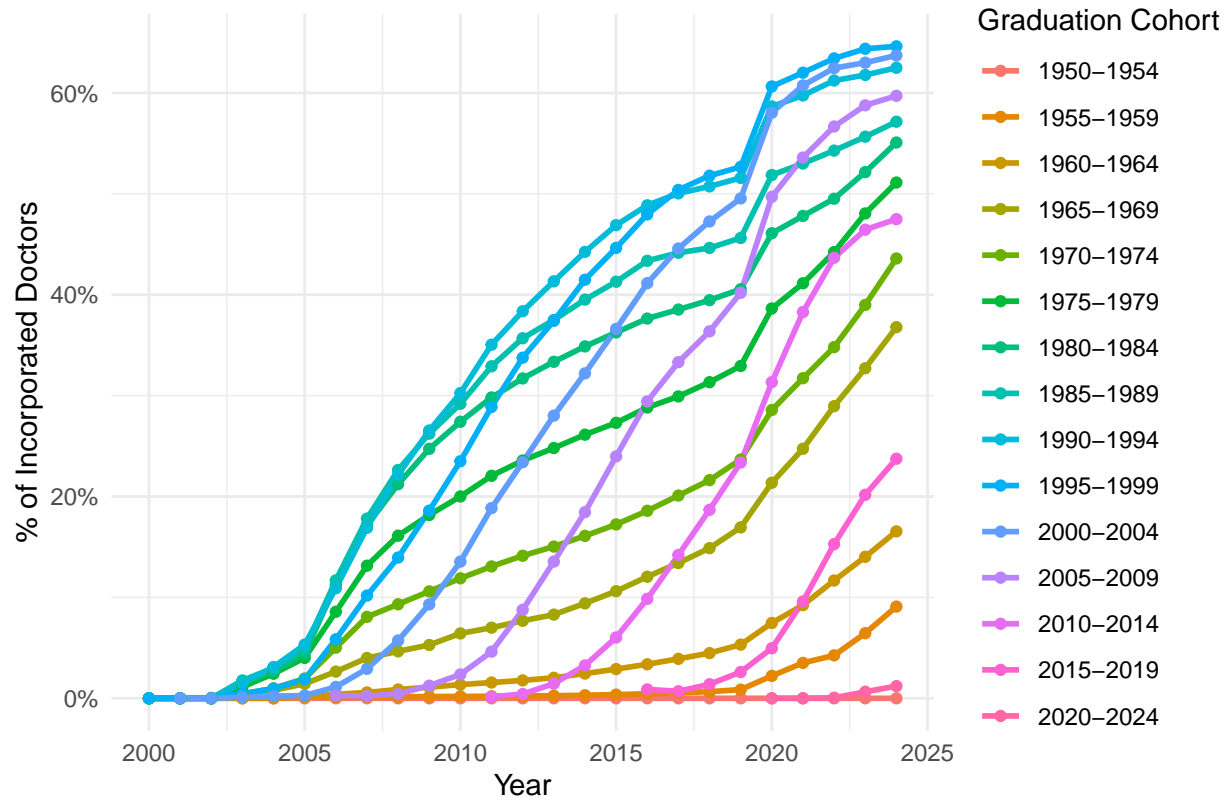


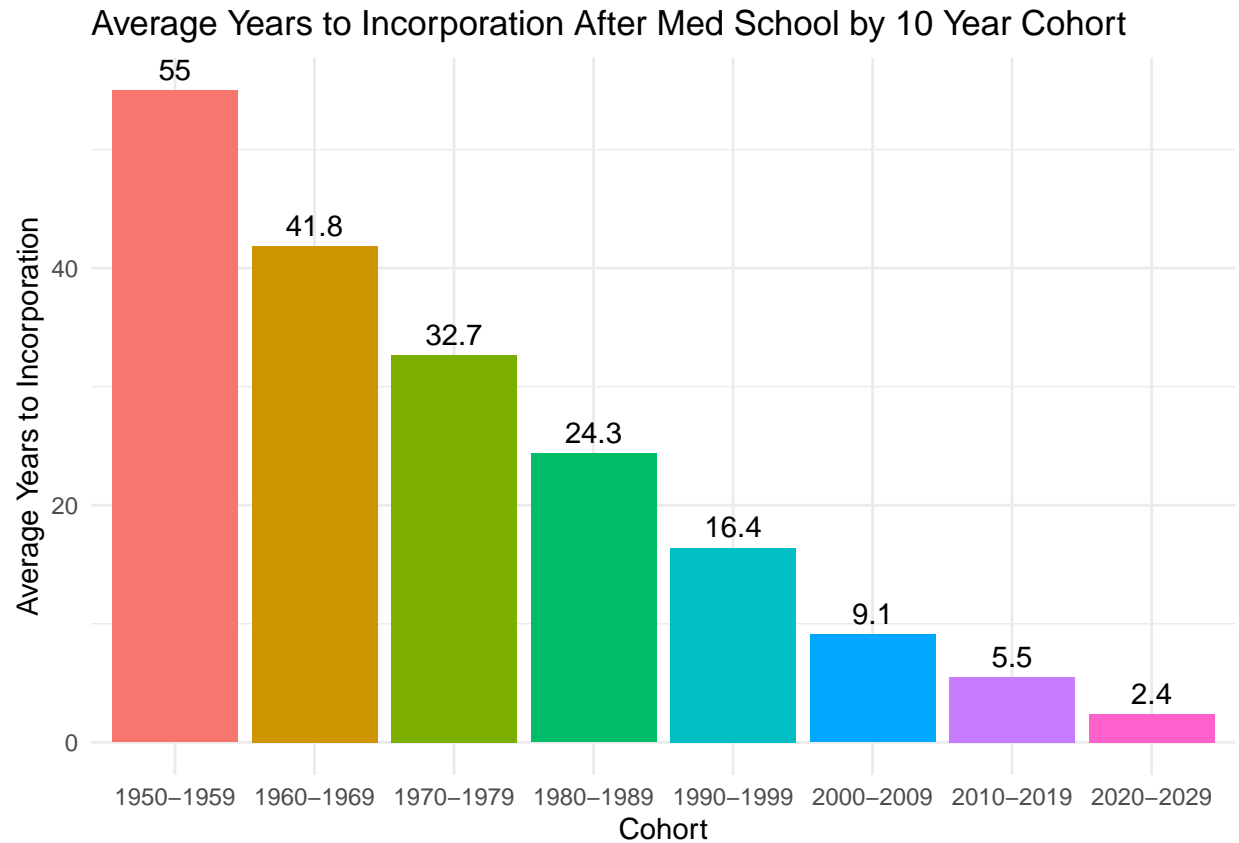
This is not informative since there is lacking of any expiration of incorporation.

Total Incorporated Doctors per Cohort Over Time



Proportion of Incorporated Doctors per Active Cohort Over Time



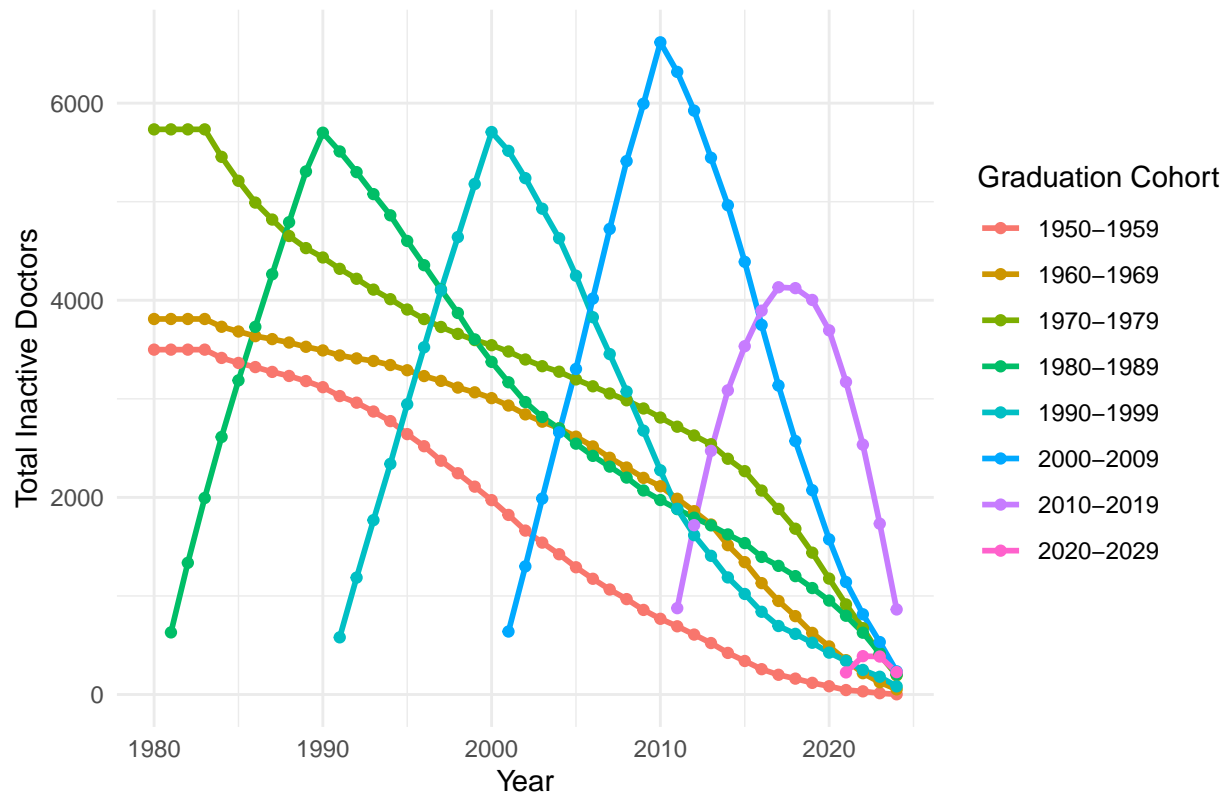


Some of the averages include negative values pulling down the average. This is due to new doctors joining incorporated practice that where incorporated before they graduated med school. There are negative values for only 48 of the doctors.

gap	count	prop
0	15310	0.40
1	1885	0.05
2	2144	0.06
3	1946	0.05
4	1432	0.04
5	2234	0.06
6	1917	0.05
7	1296	0.03
8	1061	0.03
9	924	0.02
10	871	0.02

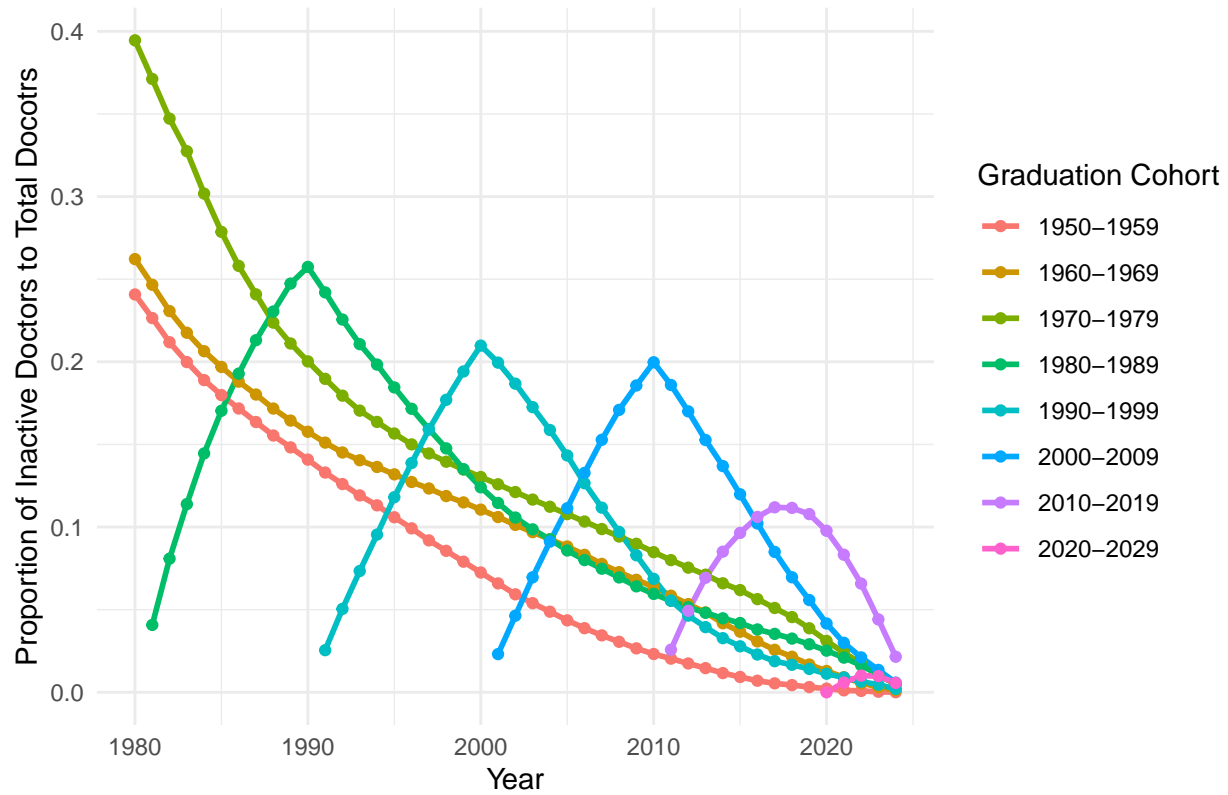
The average amount of time for a doctor to become active after med school is 5.4 years, and the median is 2 years.

Number of Doctors per Cohort Over Time (Inactive Doctors)

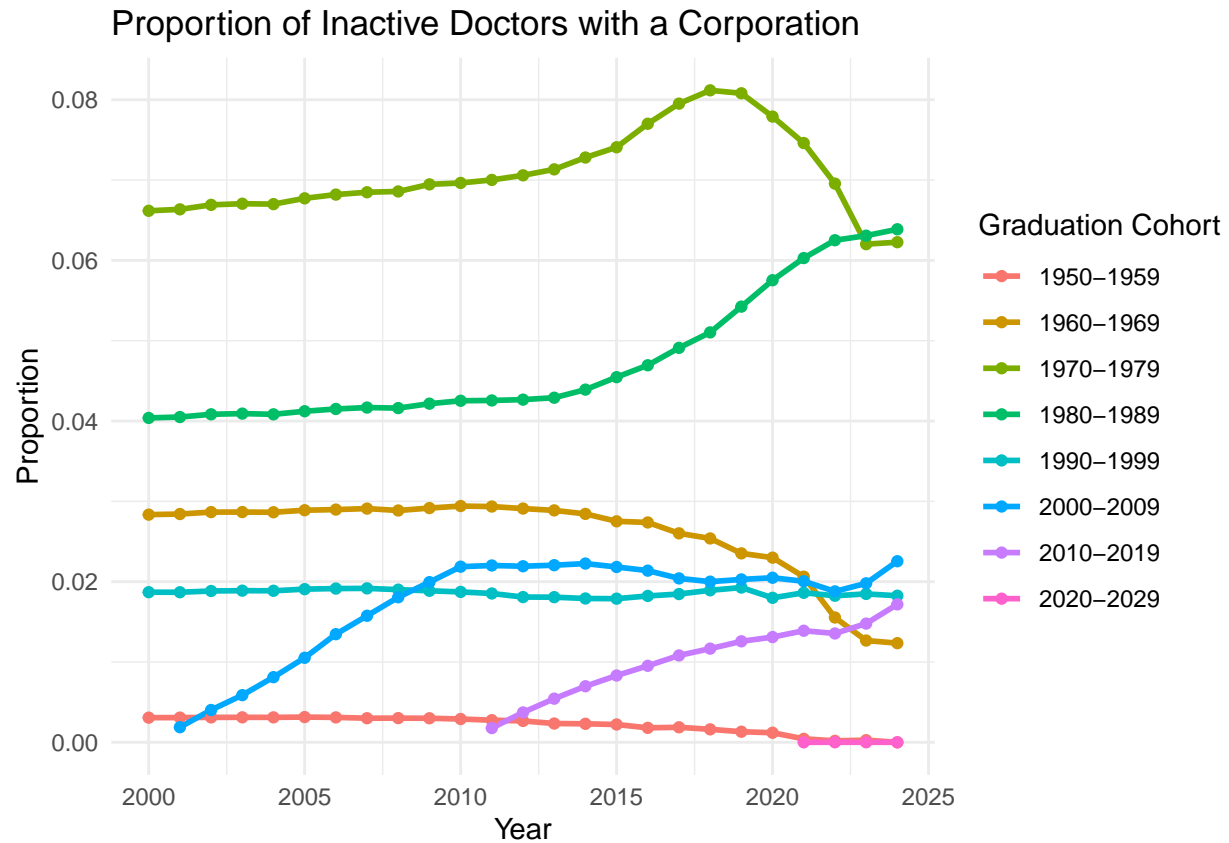


This is a graph showing the history of doctors that are as of now are inactive.

Proportion of Inactive Doctors to Total Doctors per Cohort



An inactive doctor is a doctor that is no longer active as of when the data was collected. So this is showing an inactive doctor today, when they were active in the past. All the lines trend to zero due to active doctors will be a larger and large amount the closer you get to the present.



An inactive doctor counts as having a corporation if they have a corporation name, ever left a corporation or have an expiration date for their corporation. The proportion is how many doctors within a cohort that ever had a corporation divided by all active doctors at the time (who no longer practice today).