2018 Salary Survey

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Disclaimer

- This was private work by me
- Nothing here was approved of, reviewed, or acknowledged by Knox County or NAME.

This was an informal survey

- Questions come up on the NAME mailinglist regarding what people really make.
- As far as I know, there has never been a comprehensive salary survey.
- Some of the legal eagles on the list suggested that there were legal issues with an employer doint one.
- So, I decided to do one as a private person.

Cohorts

- Pathologists
  - N=192 (185 with usable income data)
- MDIs
  - N=25 (19 with usable data)
- Autopsy Assistants
  - N=10 (9 with usable data)
- Lay Coroners
  - N=6 (5 with usable data)
- All the rest had too few responses for any cohort analysis at all

Because of the small number of non-FP respondents, the rest of this talk is FP only

- Non-FP data was published to the mailing list, such as it was.
- So, you non-FP folk who responded, please encourage your colleagues to respond next year, and I'll have better data.

Demographics

- Age
  - Mean 49.2, median 50, range 31-78
  - Bimodal, with peaks at 35-40 and 55-60
- Sex 99 male, 88 female, 1 other, 1 NA
- 44 Chiefs, 21 Deputies, 108 Staff, 5 Contractor, 6 Consultant
- Race: 149 White, 10 Black, 7 Asian/Indian, 1 Native American, 2 Biracial/mixed/other

Demographics 2

- Experience: Basically even from 10-30+ years in 5-year bins, at 20-26 each, 37 were 5-9 years, 30 less than 5 years, 2 Fellows
- Office type: 49 regional, 17 private, 72 single city/county, 43 state
- Academic: 25 tenured, 93 non-tenured, 39 non-faculty affiliate, 79 none

Region

Federal region 1 (CT, ME, MA, NH, RI, VT)	6
Federal region 2 (NJ, NY, Puerto Rico, US Virgin Islands)	15
Federal region 3 (DE, DC, MD, PA, VA, WV)	11
Federal region 4 (AL, FL, GA, KY, MS, NC, SC, TN)	43
Federal region 5 (IL, IN, MI, MN, OH, WI)	35
Federal region 6 (AR, LA, NM, OK, TX)	19
Federal region 7 (IA, KS, MO, NE)	9
Federal region 8 (CO, MT, ND, SD, UT, WY)	13
Federal region 9 (AZ, CA, HI, NV, Pacific islands)	19
Federal region 10 (AK, ID, OR, WA)	5
I travel all the time	3

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Basic income data

- Definitions:
  - "income" is income from primary job
  - "external income" is other income (e.g. consultations, second job, whatever)
  - "total income" is the total of the two

Pathologist data
Avg. abt $223,000 base,
$250,000 total with external

- All comers, income: mean $216,133, median $206,000
- All comers, total income: mean $256,664, median $236,00
- Full time (40+ hrs) base income: mean $223,445, median $210,713
- Full time, total income: mean $251,514, median $235,500
- Note that all-comers > full time for total income


Outside income
Median about $33,000

- All comers, outside income for those with outside income > 0
  - Mean: $81,503 (but note median), SD $11,546 SEM: $1,154

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
700	11125	33000	81503	100250	661927

  - Clearly the mean is high due to outliers
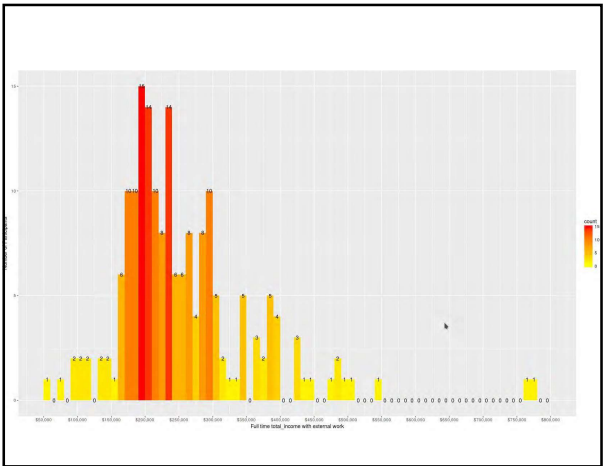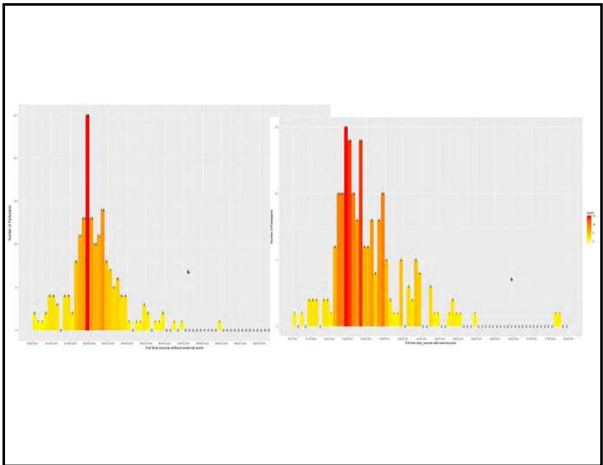 - And, yes, we have a winner with the outside income at >$600K (at 18 hours)

Graphics

- Note that in the pathologist income graph, while the mean is just over $200,000, the peak is actually just **below** $200,000, with a second mode at $240,000
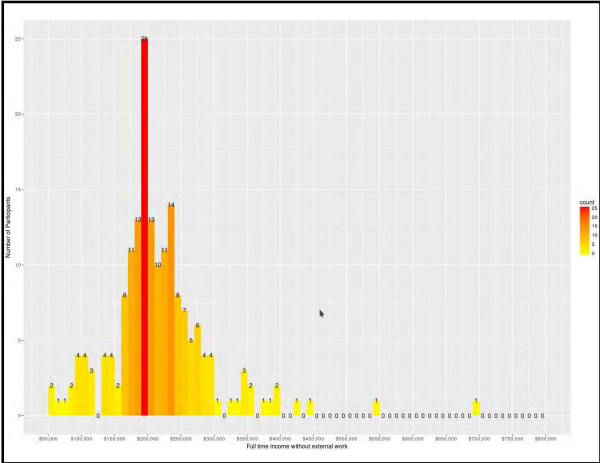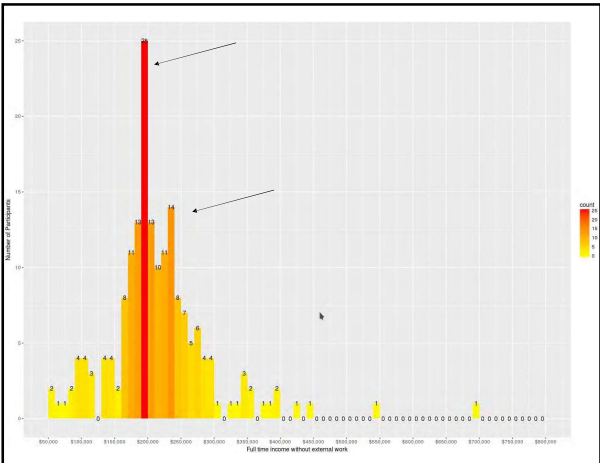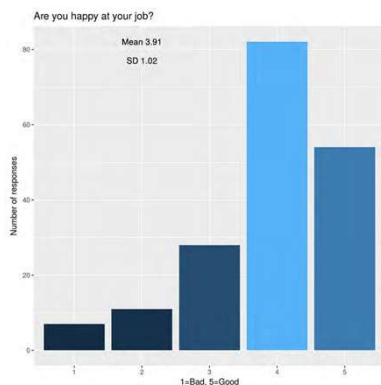
That second job helps

Happiness

- Asked multiple questions of things that might affect satisfaction
- Scale of 1 – 5
- There are thus two "happiness" scores:
  - "Are you happy"
 - Aggregate value of happiness scores

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Ranked high to low

- Free of internal influence 4.52
- Tox support 4.5
- Free of external influence 4.5
- Histology 4.22
- Radiology 4.14
- Transcription 4.00
- Happy at job 3.91
- Morgue facilities 3.89
- Office leadership 3.87
- Adequate time 3.84
- Adequate consultations 3.75
- Quality control procedures 3.74
- Administrative support 3.64
- Support from superior agency 3.56

Are you happy at your job?

Mean 3.91
SD 1.02

Number of responses

1=Bad, 5=Good

Hours

- Clock time at job:
  - Mean: 44.15, median 45, sd 12.48
- Off clock time at job:
  - Mean 7.18, median 5, sd 9.06
- Total clock+off_clock
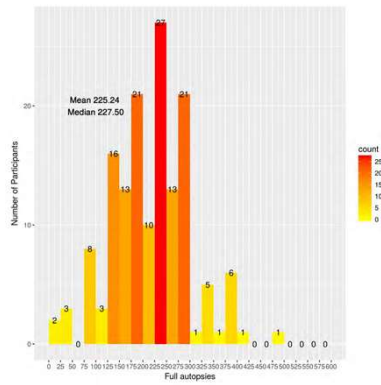 - Mean 51.38, median 50, sd 15.8
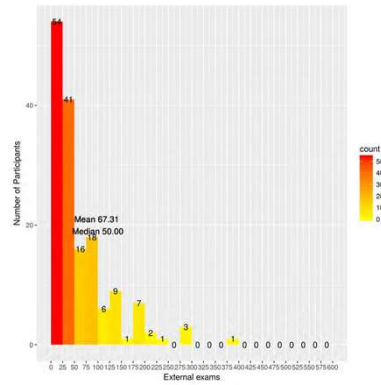
Total hours on job
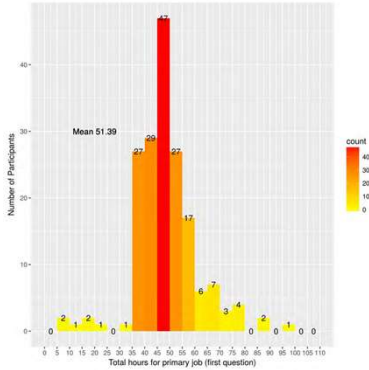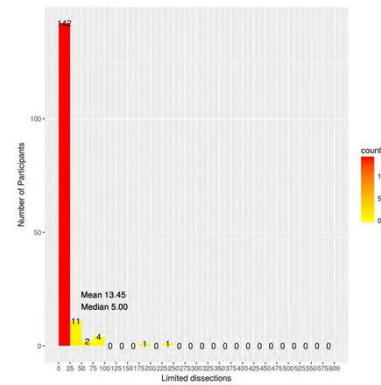

Autopsy numbers

- Standards are good thing...

Full autopsies only

External exams

Limited dissections

Total autopsy equivalents

Mean 243.65
Median 250.00

Number of Participants

Weighted combination (5:1 external, 3:1 limited)
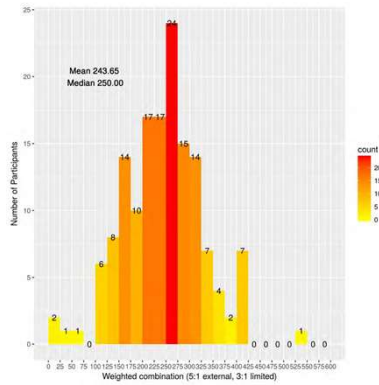
Do you do you consults?

- 14 no answer
- 90 "no"
- 67 "yes, as a sideline"
- 6 'yes as my main thing"

Consults and total income

- No answer – mean $273,454, median $236,000
- No – mean $222,844, median $215,000
- Yes, as a sideline – mean $293,138, median $283,275
- Yes, as the main thing – mean $366,721, median $312,500

Consult rate per hour

- Sideline – mean $455.40, median $450.00, max $2000.00, min $150.00, n=67
- Primary job – mean $410, median $400.00, max $600.00, min $ 300.00, n=6
- (not significant, p=0.49)
- Overall – mean $452.20, median $450.00, max=$2000.00, min: $150.00

Number of consults per year

- Sideline: mean 10.3, median 5, min 0, max 109
- Primary job: mean 44.5, median 36.5, min 20, max 90
- Significant p=0.0239
- Overall: mean 13.1, median 6, min 0, max 109

Locums

Do you do locums?

- No answer – 4
- No – 157
- Yes, it's a side thing – 14
- Yes, it's full time - 2

Total income

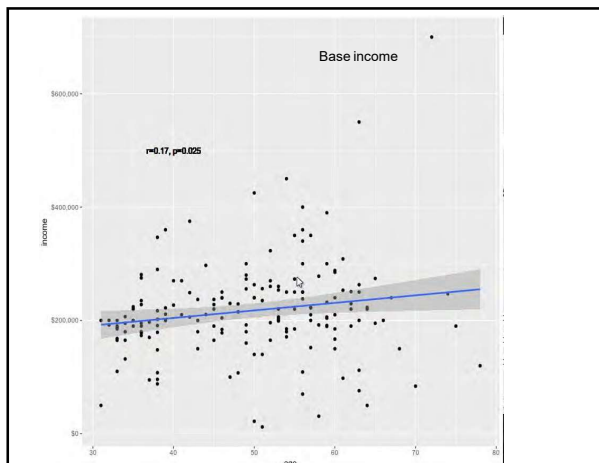- No: Mean $255,513, Median: $237,000, min: $12,000, max $775,000
- Yes, sideline: Mean $304,975, Median $267,000, min: $104,000, max: $502,000
- Yes, primary: Only 2 responses, and I'll not report them because they might be identifiable, but it's significantly lower – at the part-timey level feel.
- No answer: Mean $274,232, median $230,963, min: $210,000, max: $425,000

Income correlations and stratifications

Age and income

- Relatively poor correlation, mostly related to outside income – and that mostly due to a couple of outliers

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- Primary income (not total income) goes up with age **very slightly** until the late 50s, and then slowly starts down. Thus, the linear regression is positive, but the correlation is actually fairly low. R=0.17, p=0.025. The smoothed regression shows that once you get past the first couple of years, it's essentially flat, and then falls, but with increasing variation

- If you look at the curve (the second plot), the primary rise in income is between 30 and 40 years of age

- But the **variance** balloons at the end

Base income
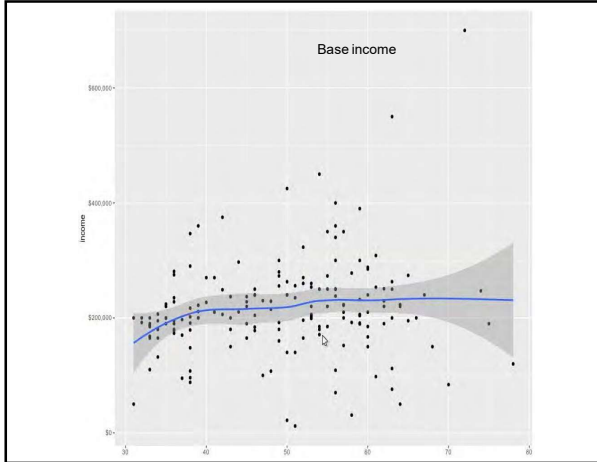
Sex

- Comparing m/f, ignoring the "other" and "NA"

- Male income:mean $231,170 median $228,500, min $22,000, max $700,000
- Female income: mean $195,413, median $ 196,000, min $12,000, max $390,000
- P=0.007
- Male total income: mean $282,424, median $264,500, min: $46,000, max $775,000
- Female total income: mean $230,374, median: $210,000, min$12,000, max $769,327

If you look at the graph for income (not total income), both males and females peak just under $200,000, but males are skewed to the right.
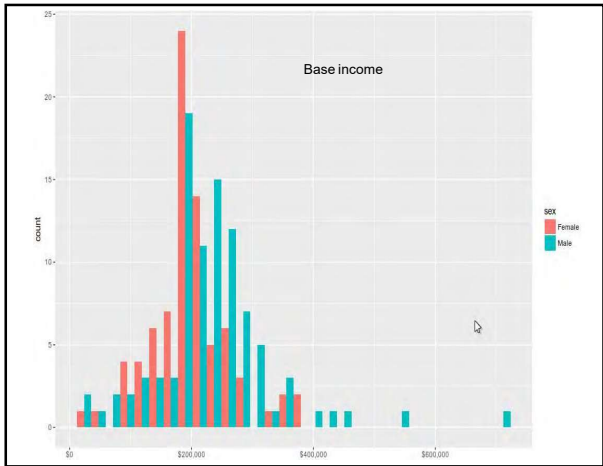
Here it is with the density graphs
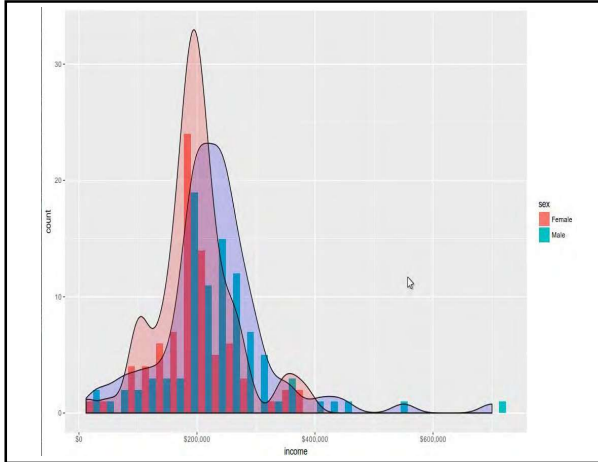
The difference becomes even more impressive if you look at total income

- Male mean $282,424 median $264,500
  - Range $46,000 - $775,000
- Female mean $230,374, median $210,000
  - Range $12,000 - $769,000
- P=0.001
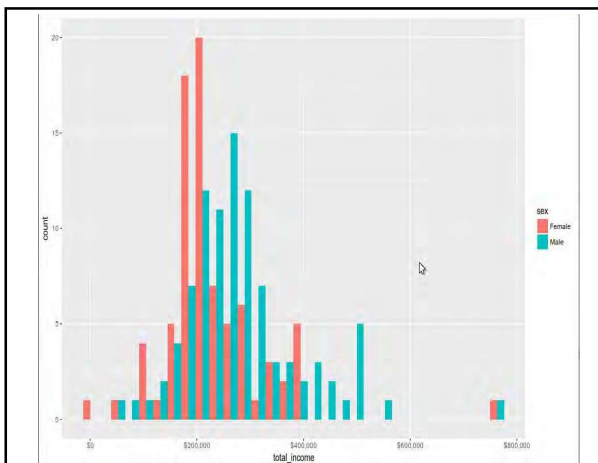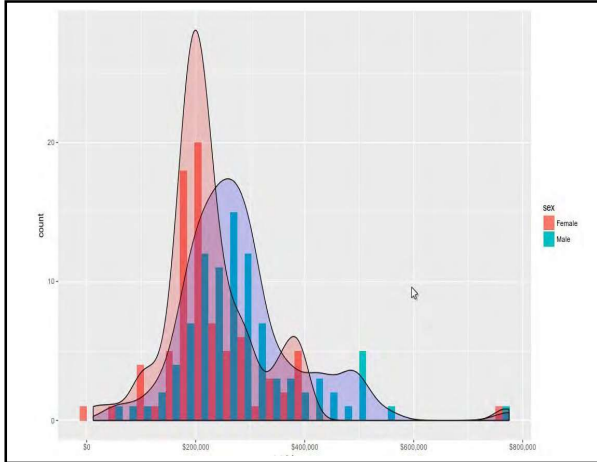
This discrepancy "sort of" persists across multiple variables

- The pattern over title,age loses statistical significance for each class, but stays in anova.
- There is a huge over-representation of young females, that makes things hard because you start running out of samples in stratification
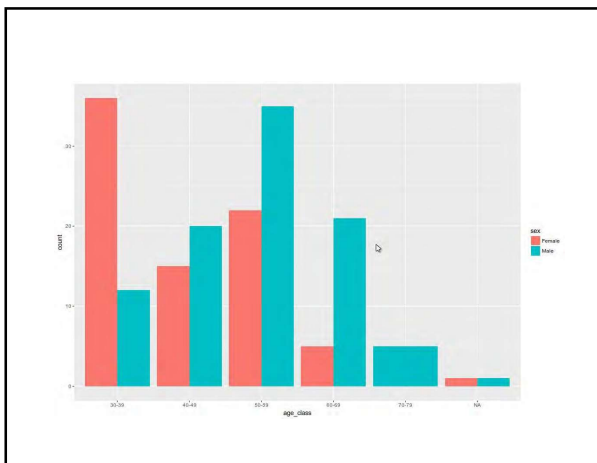
But sort of goes away with rank

Rank and sex

- Chief
  - Male: mean $239,447, n=10
  - Female: mean $240,600, n=34
- Deputy
  - Male: mean $213,960, n=10
  - Female: mean $172,102, n=7
- Staff
  - Male: mean $231,591, n=46
  - Female: $196,140,n=56
- Private contractor

- ANOVA of rank and sex shows significance with rank, and no significance with sex (p=0.004 for ranks, p=0.14 for sex).
- If you remove the low-n titles (private consultant, contractor) and just compare Chief,Deputy Chief, Staff, then p for rank drops to 0.09, and sex 0.20)

Race and income

- Too few non-caucasians to break up by individual race, so simply did "white/non-white."
- Base income:
  - White: mean $217,000, median $206,325, n=153
  - Non-white: mean $188,200, median $200,000, n=15
  - P=0.05
- Numbers too small for further stratification
- Numbers too small to draw conclusions for total income, because too few non-white folk do outside work

Happiness correlations

- Two measures of happiness – an aggregate score made from all of the satisfaction scores, and the single "are you happy" score

Sex and happiness

- Females consistently less happy than males, but not statistically significant.

Aggregate satisfaction and income

- Money can't buy happiness, but you can rent it.
- Er, at least for men...
- With men, there is a significant positive correlation between income and aggregate average satisfaction – more significant for base income.
- For women, there is a nonsignificant postive correlation between income and satisfaction for base income, and a negligible inverse correlation for total income.
  - Men,
    - r=0.311 for income, p=0.0058
    - R=0.238 for total_income, p=0.037
  - Women
    - R=0.202 for income, p=0.105
    - R= -0.07 for total income, p=0.5667
- It's positive but not significant for the simple "are you happy" question.

So...

- I guess there are a couple of ways to interpret this.
  - The first is that there's a distinction between being happy at one's job and being happy with one's working conditions.
  - The second is that there's a difference between how one view's onself as being happy, and whether or not one is actually all that happy.
  - Or something else altogether... I don't know that I can tell the difference.

Rank/title

- Not surprisingly, Chiefs make the most in larger offices, though less than private contractors. Oddly, staff pathologists make more than Deputies, on average. Note, however that the number of private contractors and consultants is low, but includes non-FP (e.g. anthro, dentist, etc.).
  - Chiefs: mean $239,709, median $245,000, n=44
  - Deputy Chiefs: mean $198,185, median $215,000, n=18
  - Staff Pathologsts: mean $211,808, median $200,000, n=104

Rank/title and satisfaction
– It's good to be Chief!

- Happy
  - Chief 4.28
  - Deputy Chief 3.78
  - Staff 3.83
  - Private contractor 3.5
  - Consultant 3.2

Race and happiness
Non-whites happier

- "Happy?"
  - White mean 3.73, median 4
  - Other mean 4.36, median 4
  - P=0.015
- Also happier with aggregate score

Region

- Federal regions:
- 1 CT, ME, MA, NH, RI, VT
- 2 NJ, Ny, Puerto Rico, Virgin Islands
- 3 DE, DC, MD, PA, VA, WV
- 4 AL, FL, GA, KY, MS, NC, SC, TN
- 5 IL, IN, MI, MN, OH, WI
- 6 AR, LA, NM, OK, TX
- 7 IA, KS, MO, NE
- 8 CO, MT, ND, SD, UT, WY
- 9 AZ, CA, HI, NV, Am. Samoa, Guam, Mariana, Pacific Trust Terr.
- 10 AK, ID, OR, WA

Region

- It makes a difference for base income
- Regions 8 and 9 do better
- Regions 2 and 3, not so much
- Total income shows same pattern, with regions 8 and 9 raking it in, but loses significance

Region – Base income
ANOVA p=0.012

- Region 1: $235,550, n=6
- Region 2: $156,225, n=15
- Region 3: $199,777, n=9
- Region 4: $207,694, n=42
- Region 5: $215,622, n=33
- Region 6: $231,870, n=19
- Region 7: $214,115, n=9
- Region 8: $236,717, n=12
- Region 9: $230,126, n=19
- Region 10: $224,800, n=5
- Travel around: $123,666, n=3
- Outside US: $310,419,n=7

- 1 CT, ME, MA, NH, RI, VT
- 2 NJ, Ny, Puerto Rico, Virgin Islands
- 3 DE, DC, MD, PA, VA, WV
- 4 AL, FL, GA, KY, MS, NC, SC, TN
- 5 IL, IN, MI, MN, OH, WI
- 6 AR, LA, NM, OK, TX
- 7 IA, KS, MO, NE
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Region – Total income
ANOVA p=0.17

- Region 1: $249,750, n=6
- Region 2: $212,198, n=15
- Region 3: $215,002, n=9
- Region 4: $251,033, n=42
- Region 5: $253,410, n=33
- Region 6: $240,055, n=19
- Region 7: $247,960, n=9
- Region 8: $302,201, n=12
- Region 9: $306,201, n=19
- Region 10: $258,800, n=5
- Travel around: $249,566, n=3
- Outside US: $339,302,n=7

- 1 CT, ME, MA, NH, RI, VT
- 2 NJ, Ny, Puerto Rico, Virgin Islands
- 3 DE, DC, MD, PA, VA, WV
- 4 AL, FL, GA, KY, MS, NC, SC, TN
- 5 IL, IN, MI, MN, OH, WI
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Experience

- Follows the same pattern as age – increases and then decreases for base income
- Not significant for base income, but old folk score big for total income

Experience – Base income, mean anova p=0.20

- NA $199,000
- Fellow $72,500
- < 5 yrs $194,229
- 5-9 yrs $209,345
- 10-14 $223,984
- 15-19 $224,310
- 20-24 $241,101
- 25-29 $227,711
- 30+ $213,191

Experience, total income
ANOVA p=0.0007 for all, p= 0.003 excluding Fellow

- NA $251,500
- Fellow: $72,500
- <5 yrs: $200,801
- 5-9: $230,286
- 10-14: $264,184
- 15-19: $285,015
- 20-24: $292,454
- 25-29: $268,539
- 30+: $309,843

Relationship between jurisdiction and office

- Work directly (e.g. line item) for jurisdiction (i.e. work directly for mayor, senate, etc).   n=93
- Part of health department n=44
- Part of law enforcement n=10
- Private contractor with jurisdiction(s) n=21
- General path with forensic on side n=16

Mean incomes

- Direct; base $212,821, total $254,434
- DHHS: base $200,301, total $232,937
- LEO: base $238,100, total $297,162
- Contractor: $240,352, total $306,468
- General path:$279,226, total $ 307,975
- Anova p=0.04

Specialty certification

- Too few non-FP folk responded to do good statistics.

Multivariate analysis

Base income

- The proportion of variance explained by the variables I asked about: 69.12%
- In order of importance:

Base Income

- Region: 15.0%
- Title 9.8%
- Does locums 5.5%
- Specialty certification (any) 5.49%
- Experience: 5.2%
- Employer type: 4.9%
- Office type: 3.2%
- Does consults 3.1%
- FP certification 2.7%
- Office size 2.4%
- Race 2.4%
- Sex 2.3%
- System size 1.9%
- Age 1.6%

- Academic affiliation 1.0%
- Hours worked on the clock: 0.85%
- Off clock hours 0.7%
- Number of externals 0.22%
- Number of limiteds: 0.11%
- Number of autopsies: 0.08%

What is the most important relative predictor of base income for forensic pathologists?

Answer A: Subspecialty certification in Forensic Pathology
Answer B: Race
Answer C: Region
Answer D: Experience
Answer E: Hours worked

Base Income

- **Region: 15.0%**
- Title 9.8%
- Does locums 5.5%
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- Office size 2.4%
- Race 2.4%
- Sex 2.3%
- System size 1.9%
- Age 1.6%

- So, it seems that race and sex are not stratified out by the other things that I asked about, and are thus really independent **or** would be stratified out by something in the 30% of variance that my questions do not address, but are likely truly independent.
- Also of interest is "does consults" and "does locums" are independent predictors of **base** income. Perhaps this is because more mature (e.g. age & title) folk are also more likely to do outside work **and** are more likely to have higher incomes.
- Also note that "any" specialty certification is more important than FP per se.

Total income

- 86% of the variance for total income is accounted for (basically because base income is so important to it)

- Base income: 19.5%
- Does consults: 19.1%
- Experience: 7.2%
- Region: 6.3%
- Title: 5.8%
- Does locums 4.6%

- Employer 4.3%
- Office type 3.4%
- Office size 2.9%
- Sex 2.5%
- System size 2.2%
- Subspecialty cert (any) 2.1%
- Race 1.7%
- Age 1.2%

- FP cert 0.93%
- Academic 0.64%
- Number of externals 0.35%
- Clock hours 0.22%
- Number of autopsies 0.20%
- Number of limiteds 0.063%

Removing base income – outside income only

- Questions explain 79.55% of variance.
- In contrast to base income, and total income, FP certification is more important than "any" specialty certification, which makes sense

- Does consults 33.2%
- Experience 6.5%
- Region 6.5%
- Does locums 5.9%
- Employer 4.5%
- Office type 3.3%
- Office size 3.3%
- System size 3.2%
- Title 2.4%
- Base income 2.2%
- FP certification 1.9
- Race 1.5%
- Sex 1.6%

- Clock hours 0.88%
- Age 0.74%
- General subspecialty 0.66%
- Academic affiliation 0.58%
- Number of autopsies 0.37%

- Number of externals 0.36%
- Off clock hours 0.098%
- Number of limiteds 0.06%

Relative weights – happiness

- My laptop doesn't have enough memory to do all the possible happiness-related variables in one run, so I've broken it up into three groups: demographics, benefits, satisfaction variables.
- This is important because it **does** matter whether you calculate them altogether or not, though not a whole lot. For instance, adding "off clock hours" to the demographics section adds 2% explanatory power to that section. Even though "off clock hours" is worth only 0.66%, it changes "Title" from 5.9% to 6.4%. So, take these as general rankings rather than really accurate relative contributions.
- Also, the three sections add up to more than 100%, which makes sense, since the variables are not mutually exclusive and independent. Not surprising, the satisfaction measurement variables provide a more complete accounting.

Happiness – relative weights Demographics

- Demographics can account for approximately 35.74% of the "Are you happy score"
- Once again, it's good to be Chief.

- Title 6.4%
- Experience 5.9%
- Region 5.1%
- Race 2.9%
- Sex 1.8%
- System size 1.90%
- Office type 1.75%
- Office size 1.45%
- Does consults 1.3%
- Income 1.45%
- Does locums 1.26%
- FP cert 0.88%
- Age 0.72%
- Off clock hours 0.66%
- Clock hours 0.51%
- General cert 0.24%
- Outside income 0.21%

Benefits 19.98%

- Dental 4.2%
- Life ins 2.7%
- Health ins. Satisfaction score 2.2%
- Car 2.1%
- Health ins 1.1%
- Benefits Y/N 1.1%
- Malpractice ins. 1.0%
- Aggregate benefit score 0.998%
- License 0.99%
- Meeting 0.87%
- Pension 0.84%
- CME subsidy 0.54%
- Exam subsidy 0.52%
- Health savings 0.62%
- Travel 0.15%

Satisfaction metrics 67.37%

- Leadership 15.6%
- Admin svs 15.1%
- Internal independence 9.9%
- Time 8.3%
- Support from superior agency 4.0%
- External indpendence 3.1%
- Transcription 2.5%
- Quality control 2.3%
- Morgue facilities 2.1%
- Specialty consults 1.99%
- Histology 1.06%
- Tox 0.63%
- Rads 0.49%

Among metrics of workplace satisfaction, which of the following is most important?

Answer A: Quality of leadership
Answer B: Adequate time
Answer C: Morgue facilities
Answer D: Independence from influence by outside agencies
Answer E: Access to adequate radiology services

Satisfaction metrics 67.37%

- **Leadership 15.6%**
- Admin svs 15.1%
- Internal independence 9.9%
- Time 8.3%
- Support from superior agency 4.0%
- External indpendence 3.1%
- Transcription 2.5%

- Quality control 2.3%
- Morgue facilities 2.1%
- Specialty consults 1.99%
- Histology 1.06%
- Tox 0.63%
- Rads 0.49%

I plan to do this again next year

- Please encourage non-FP colleagues to respond.
- I will try to make the survey shorter and easier
- The more people who respond, the more the statistics become meaningful.
- If you can think of important correlation variables I didn't ask, let me know.
- Thanks to all who responded this year.