



The Utah Medical Education Council

# Utah's Genetic Counselor Workforce, 2018:

A Study on the Supply and Distribution of  
Genetic Counselors in Utah





# **UTAH'S GENETIC COUNSELOR WORKFORCE, 2018:**

## ***A STUDY ON THE SUPPLY AND DISTRIBUTION OF GENETIC COUNSELORS IN UTAH***



**The Utah Medical Education Council**

**State of Utah**

**[www.utahmec.org](http://www.utahmec.org)**

**2018**

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Utah's Genetic Counselor Workforce, 2018: *A Study of the Supply and Distribution of Genetic Counselors in Utah*

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## THE UTAH MEDICAL EDUCATION COUNCIL

The Utah Medical Education Council (UMEC) was created in 1997 out of a need to secure and stabilize the state's supply of health care clinicians. The enabling legislation authorized the UMEC to conduct health care workforce research, to advise on Utah's health care training needs, and to influence graduate medical education financing policies. In addition, UMEC facilitates the training of healthcare professionals in rural areas of the state. The state legislature expanded UMEC's research responsibilities in 2013 to include nursing and UMEC has accepted the designation as the Nursing Workforce Information Center. The UMEC is presided over by an eight-member board appointed by the Governor to bridge the gap between the health care workforce industry and educational interests.

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## EXECUTIVE SUMMARY

- There are 172 genetic counselors licensed in the state of Utah with 135 providing at least some services in the state. Of those, 63 live in Utah and 71 live out of state.<sup>1</sup>
- There are 2.0 genetic counselors per 100,000 living and working in Utah. Among clinical genetic counselors, there are 1.2 per 100,000. Both of these numbers are above the national average of 1.0 per 100,000. However, it is not likely that these numbers equate to a surplus in the state.
- The average age of all genetic counselors working in Utah is 37.6 years with only 15.0% over the age of 50.
- The workforce is overwhelmingly female with 94.4% of the workforce living in Utah and 96.0% of the national workforce.
- An estimated 90.3% of the workforce living in Utah is non-Hispanic white with the Hispanic workforce being the most underrepresented in the state.
- Only 11.1% of the workforce living in Utah reports growing up in the state, however this question had a non-response rate of 28.7%.
- Over a quarter (29.6%) of the workforce living in Utah attended the University of Utah for their graduate genetic counseling training.
- The genetic counselor workforce living in Utah has an average of 6.0 years of experience working 30 to 40 hours per week while those living outside of Utah have an average of 9.5 years of experience working 30 to 40 hours.
- Cancer genetics is the most common specialty among genetic counselors living in Utah with 38.9% of the workforce. No other specialty had more than 14.8% of the workforce living in Utah reporting.
- Non-academic diagnostic laboratories were the most common settings among genetic counselors living in Utah with 29.6% of the workforce followed by university medical centers with 25.9%.
- The vast majority (94.4%) of the workforce living in Utah cited Salt Lake County as the location of their primary practice setting. While half of all genetic counselors living in the state provide remote services within Utah, it is unclear whether this is enough to meet the needs of Utahns outside of Salt Lake County and the Wasatch Front.
- Genetic counselors living in Utah work an average of 40.8 hours per week, with 31.5% who reported working overtime on a regular basis.
- The median income for genetic counselors living in Utah is \$80,000. This is compared to \$75,000 nationally in 2016.
- Just over half (57.4%) of genetic counselors living in Utah counsel patients compared to 69.0% nationally.
- Wait time to see a genetic counselor in Utah is an average of 52.8 days for new patients, 11.9 days for established patients, and 5.4 days for urgent patients. These numbers are

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<sup>1</sup> Due to weighting and rounding, totals may not equal 135.

driven up particularly by genetic counselors who counsel patients and certain settings including university medical centers.

- An estimated 29.5% of the workforce living in Utah has changed employers within the last two years. Many of those left a clinical setting and moved to a non-clinical setting, leading to a net loss in genetic counselors working in clinical settings.
- Genetic counselors are by and large satisfied with their positions. Satisfaction rates are slightly higher for those living out of Utah and among those who had switched work settings in the last two years.
- The one genetic counseling program in the state has the capacity to train 7 students per year. Of those, approximately 45.0% will be retained immediately after graduation, however long-term retention may be closer to 25.3%. Approximately 57.4% of the workforce living in Utah practices clinical genetic counseling, leading to an estimated supply of 1.7 clinical genetic counselors per year. In order to keep up with population growth as well as FTE losses due to hour reduction, retirement, and movement away from clinical settings, Utah needs to retain 2.0 clinical FTEs per year in order to keep 1.2 clinical genetic counselors per 100,000 people.

## POLICY RECOMMENDATIONS

- 1. Change the Reimbursement Rates for Genetic Counselors.** Genetic counselors in Utah can and often do bill independently for their services, however this code does not accurately reflect all the patient interaction a genetic counselor may have and many insurance providers do not recognize this code and is therefore poorly reimbursed. This coupled with the fact that health systems often do not understand the benefits of having a genetic counselor on staff and part of a care team, including freeing up time for physicians and providing specialized expertise, is having a negative impact on the workforce. The UMEC recommends any effort to push for licensed genetic counselors to be more widely reimbursed both on a national and state level.
- 2. Increase Access to Clinical Genetic Counselors.** Although Utah has a higher than average clinical provider rate per 100,000 population than national numbers, demand for genetic counselors nationally is high and it is unclear whether one genetic counselor per 100,000 people is sufficient. Wait times for patients are higher in Utah than the national average and the mean wait time for new patients to see a genetic counselor in Utah is close to two months.
  - a. Support an increase in the amount of funding given to the University of Utah's Genetic Counseling Program in order to increase class size.
  - b. Support institutional/health system and provider education on how to utilize genetic counselors.
  - c. Increase access to genetic counseling via telehealth in order to serve patients outside of the Wasatch Front.
  - d. Support state and federally funded loan repayment programs for genetic counselors who provide clinical genetic counseling services, including those who provide counseling via telehealth.
  - e. Support efforts to provide incentives for licensed genetic counselors to train genetic counseling students in clinical settings as well as efforts to change such training requirements with the Accreditation Council for Genetic Counseling.
- 3. Enhance Data Collection.** With this baseline analysis, the UMEC has begun the task of tracking the genetic counselor workforce, however additional data is needed in order to make an accurate prediction of the demand for genetic counselors, particularly those who directly interact with patients.
  - a. Continue to conduct regular surveys of the genetic counselor workforce.
    - i. Gather data on how much time genetic counselors living outside of the state spend in providing remote services to patients in Utah.
    - ii. Gather data on how much time genetic counselors spend providing remote services to patients in rural Utah.
  - b. Increase retention data to include whether Utah genetic counselor graduates find employment in clinical or non-clinical settings.

- c. Conduct employer surveys and track the workforce that moves from clinical settings to mixed and non-clinical settings.
  - d. Support efforts to request legislative changes in order to incorporate the UMEC survey into the DOPL licensing process.
- 4. **Promote a More Diverse Workforce.** Only 13.1% of genetic counselors living in Utah identifies as a racial or ethnic minority, compared to 19.7% of the population in the state, with even larger gaps in the male workforce. Increasing diversity can help ensure that the genetic counseling needs of an increasingly diverse state are being met.
  - a. Encourage collaboration with organizations such as United Way, HealthInsight and the Utah Department of Health, local high schools, etc. to encourage minority and male youth to consider a career in the genetic counseling field.

## METHODOLOGY

### License Data

The Utah division of Occupational and Professional Licensing (DOPL) provided the UMEC with information for every licensed genetic counselor in the state. As of January 2017, there were 172 genetic counselors licensed in the state of Utah.

### Design of Survey Instrument

A variety of sources were used in order to design the first Genetic Counselor Workforce Survey. Several questions included in the instrument are standard with any workforce study the UMEC conducts, however specific wording was changed in order to more accurately apply to the genetic counselor workforce. The Professional Status Survey conducted by the National Society of Genetic Counselors was heavily referenced in the design of the survey. The advisory committee was consulted on each question and several questions were added and amended at the request of the committee.

### Data Collection

The first mailing was sent out to all genetic counselors licensed in the state of Utah in June of 2017. Respondents were tracked and a second mailing was sent to those who had not returned the survey in July 2017. A third mailing was sent in October 2017 to those who had still not responded. Data collection was completed in December 2017. A total of 147 surveys were returned for an 85.5% response rate. While this response rate is higher than many other UMEC workforce surveys, the analysis has a somewhat lower confidence interval of 95% +/- 3.3% for all genetic counselors working in Utah (including those living in other states providing remote services here) and 95% +/- 4.1% for genetic counselors both living and providing services in Utah. Survey responses were given a weight of 1.17 to account for non-respondents.

### Data Entry and Analysis

The 2018 Genetic Counselor Workforce Survey was processed in-house using Snap Surveys software. Data entry was completed by the software and in-house by UMEC staff. Once the data entry was audited and complete, the information was imported into SPSS for statistical analysis. Analysis began in December 2017.

### Survey Limitations

At 172 genetic counselors, this is one of the smallest workforce studies the UMEC has conducted. While the response rate was high enough to give us a high overall confidence interval, analysis

as detailed as previous workforce reports was not possible without providing identifiable data. In addition, because of the small sample size, it was difficult to make comparisons with the National Society of Genetic Counselors Professional Status Survey, which broke responses down by those who counseled patients and those who didn't, without providing identifiable data.

While the Genetic Counselor Workforce Survey asked respondents where they lived and whether or not they provided services in Utah, the survey did not ask how much of their time was spent providing services in Utah. Thus, it cannot be assumed that provider per 100,000 population estimates are serving Utah residents full time.

The Genetic Counselor Workforce Survey asked for the location of the respondents' primary practice location, but did not clarify whether this meant where the counselor works or where the employer is headquartered. This led to unclear data for those who work remotely from home but was not a significant portion of respondents.

## INTRODUCTION AND BACKGROUND

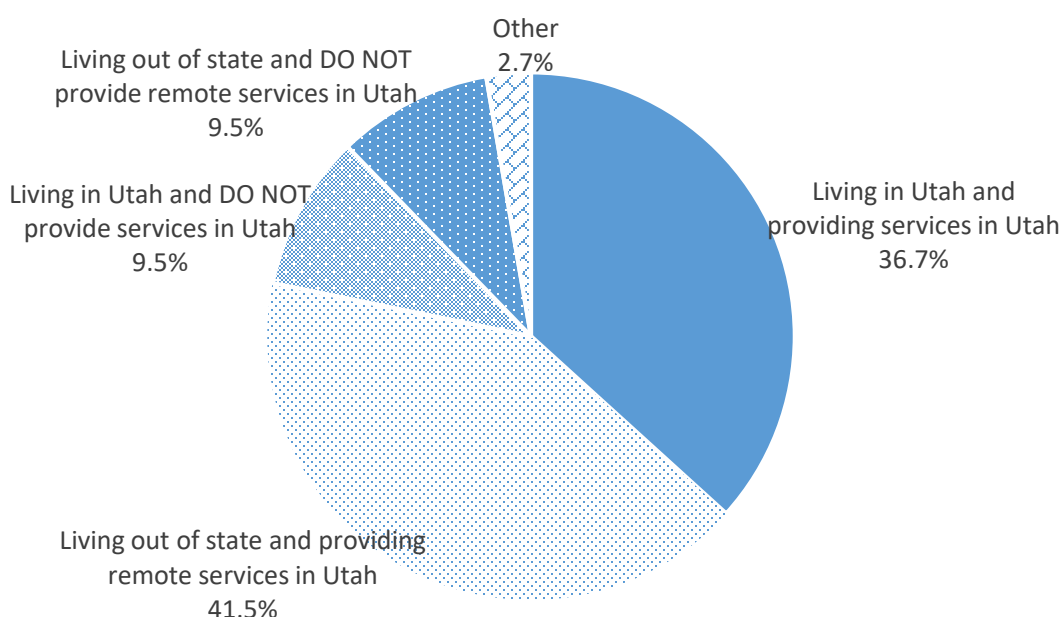
The Utah Medical Education Council has been charged with conducting periodic analyses of the medical professions in the state of Utah in order to assess workforce supply and demand. With this report, the UMEC has conducted the first state-wide analysis of the genetic counselor workforce.

As a baseline analysis, it is difficult to determine how quickly the workforce has grown in Utah. Nationally, the workforce has grown by 88% from 2006 to 2016 (Genetic Counselor Workforce Working Group) and is projected to continue this steep upward trajectory, between 29% (United States Department of Labor) and 72% over the next ten years (Genetic Counselor Workforce Working Group). Because this workforce is small and relatively new, research has only recently begun on a state and national level.

## LICENSED IN UTAH

As of January 2017, there were 172 genetic counselors licensed in the state of Utah. An estimated 78.2% (135) of those practice in the state of Utah, 41.5% (71) of those living out of state and providing at least some services in Utah and 36.7% (63) living in Utah and providing services in the state. Of the remaining 21.8% (37) who do not provide services in Utah, 9.5% (16) live in Utah but do not currently provide genetic counseling services in Utah, 9.5% (16) live out of state and do not currently provide genetic counseling services in Utah, and 2.7% (5) responded with as “other” status. Unless otherwise noted, the data in this report refers to the 134 who provide services in Utah, including both those who live in the state and those who live out of state.

**Figure 1: Practice Status of Licensed Genetic Counselors in Utah (N=172)**



The survey asked the 37 genetic counselors who do not provide any services in the state what factors influenced their decision to practice elsewhere. Family, wages/pay scale, and work environment/opportunity were each cited by 21.9% (8) as influential factors. The “other” category was the most common with 43.8% (16). When asked why they maintain a license in Utah, 41.9% (16) specifically said it was required by their employer.

When asked what factors contributed to the decision to practice in Utah, 50.4% of all those working in Utah cited practice opportunities and 79.6% of genetic counselors who live in Utah cited lifestyle.

**Table 1: Factors Influencing Decision to Practice in Utah**

Rank	Factor
1	Practice Opportunities
2	Lifestyle
3	Family
4	Wages/Pay Scale
5	Other
6	Cost of Living
7	Utah Genetic Counseling Graduate

### Genetic Counselor-to-100,000 Population Ratio

Utah has an active genetic counselor-to-100,000 population ratio of 2.0 with an estimated 63 genetic counselors living in the state and a population count of 3,123,607 as of 2017 (University of Utah). This number, however, is not an accurate representation of genetic counselors who interact with patients. When accounting only for those who report counseling patients (57.4% of the workforce living in Utah), that ratio drops to 1.2 clinical genetic counselors-per-100,000. Nationally, there is an estimated 1.0 genetic counselor per 100,000 people (United States Department of Labor), however the National Society of Genetic Counselors reports a shortage of genetic counselors engaged in direct patient care but are unsure what the ideal provider to patient ratio is as of publication (Genetic Counselor Workforce Working Group).

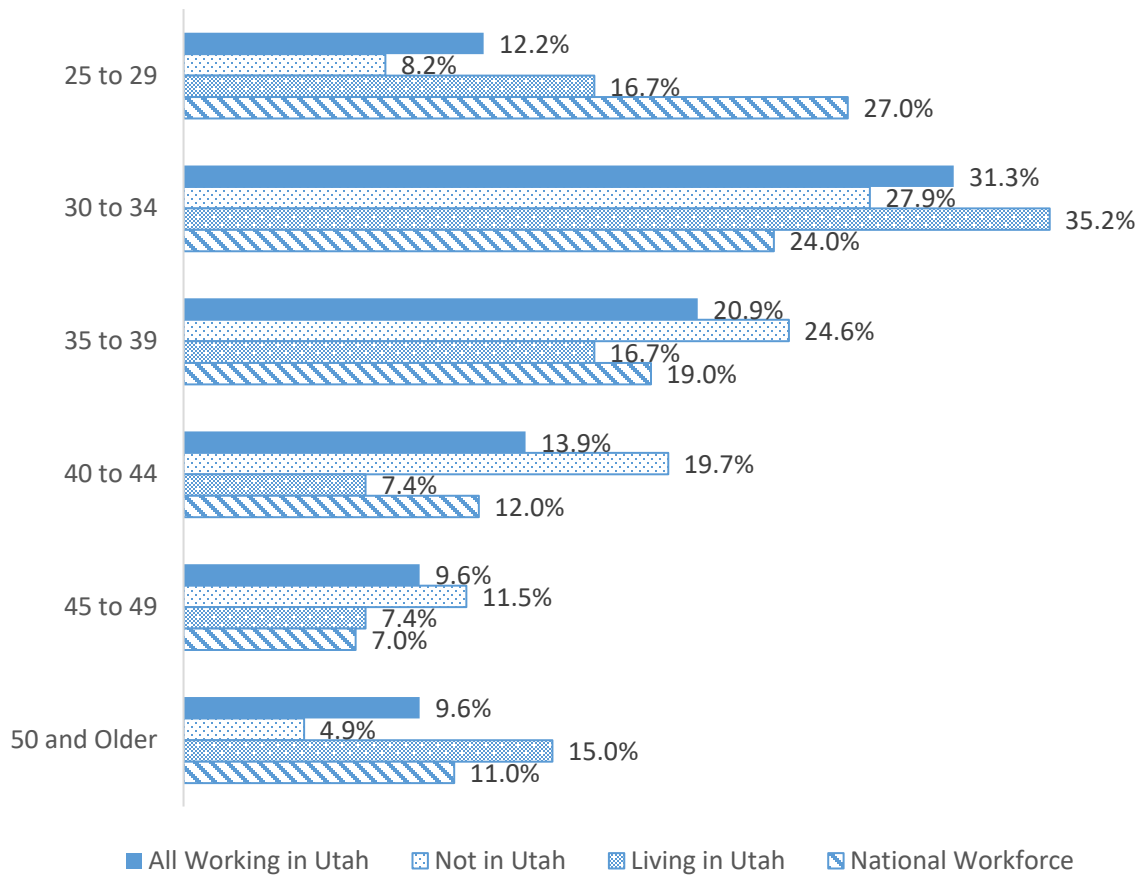
## DEMOGRAPHIC CHARACTERISTICS

### Age

The average age for all genetic counselors providing services in Utah is 37.6 years. This number is very similar when separating out those who live out of state (37.5) and those who live in Utah (37.7). When compared to the national workforce, age breakdown is fairly consistent with all groups.



**Figure 2: Genetic Counselor Age Distribution**



The genetic counselor workforce is a young one, both nationally and in Utah. With only 15.0% of the workforce living in Utah over the age of 50, it is likely that FTE loss due to retirement will remain low in the near future, as seen by the data on retirement plans below.

## Gender

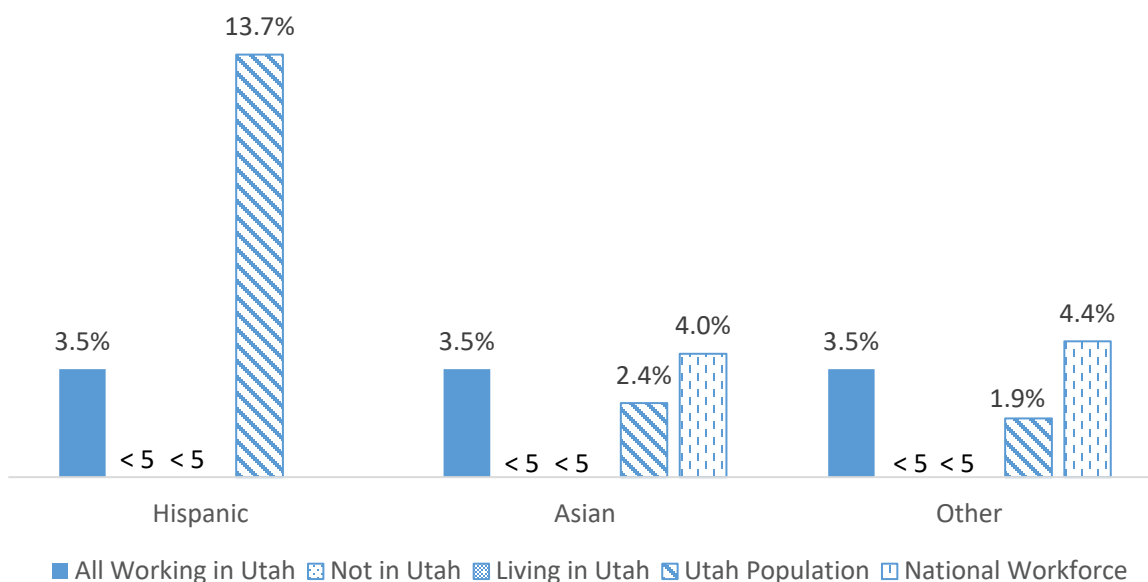
The genetic counselor workforce is overwhelmingly female with 94.4% of the workforce living in Utah. The size of the female workforce is similarly high nationally at 96.0%. Interest in the field of genetic counseling is low among male undergraduate students (Kopesky, et al.) and genetic counseling programs see fewer male applicants.

## Race and Ethnicity

The racial and ethnic makeup of genetic counselors is similarly homogenous with 91.9% of all those working in Utah identifying as non-Hispanic white and 90.3% of the workforce living in Utah identifying as non-Hispanic white. There were no respondents to the survey who identified as Black, American Indian/Alaska Native, or Native Hawai'ian/Pacific Islander. Asians are slightly

overrepresented among genetic counselors who live in Utah while Hispanics are underrepresented both in Utah and nationally with less than 2.0% of the national workforce.

**Figure 3: Racial and Ethnic Composition of Utah Genetic Counselor Workforce, Utah Population, and National Genetic Counselor Workforce**

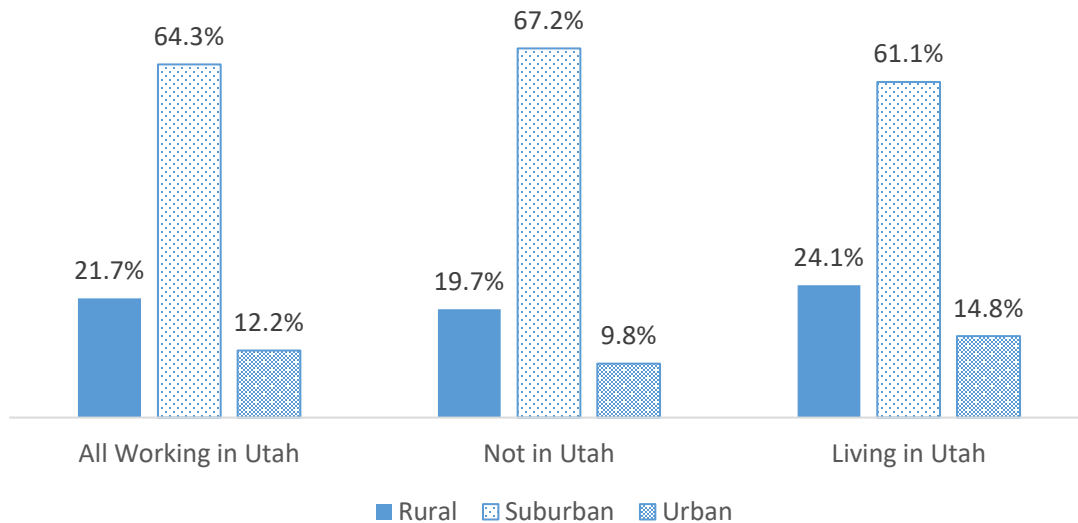


## Upbringing

A total of 11.1% (7) of genetic counselors living in Utah report spending the majority of their time growing up in Utah. Just over a quarter (25.9%, 16) of those in Utah reported growing up in a western state other than Utah and 29.6% (19) of those living in Utah reported growing up in a non-western state or internationally. This question had a non-response rate of 33.3% for those living in Utah and 28.7% for all genetic counselors working in Utah.

Respondents were also asked whether they spent the majority of their upbringing in a rural, suburban, or urban setting. These rates were very similar between those living in Utah and those living out of state, however genetic counselors living in Utah came from rural backgrounds at a slightly higher rate.

**Figure 4: Rural, Suburban, and Urban Background**



## Education Background

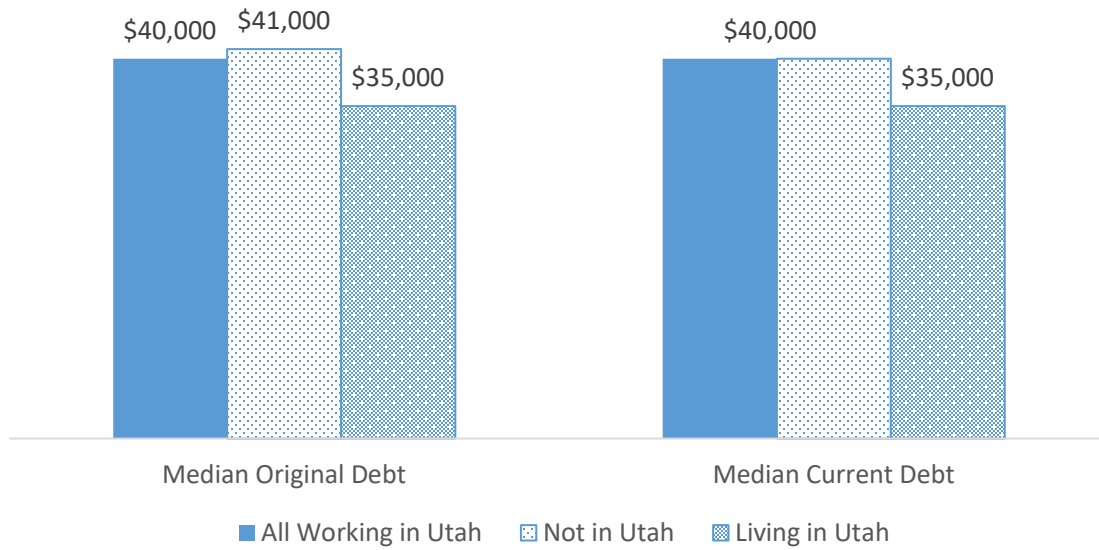
The vast majority of the workforce attended a public institution for their genetic counseling training with 68.7% (92) of all those working in Utah and 74.1% (47) of those living in Utah. Of all genetic counselors working in Utah, 15.7% (21) attended a genetic counseling program in Utah with 29.6% (19) of those living in Utah attended school in the state. Even fewer (18.5%, 12) attended school in a western state outside of Utah while over half (51.9%, 33) of genetic counselors living in Utah attended school in another state. After Utah, California was the most cited state with 11.1% (7) of genetic counselors living in Utah attending school there.

**Table 2: Location of Genetic Counseling Training**

	All Working in Utah	Not in Utah	Living in Utah
Utah	15.7%	3.3%	29.6%
Other Western States	18.3%	18.0%	18.5%
Other States	65.2%	77.0%	51.9%

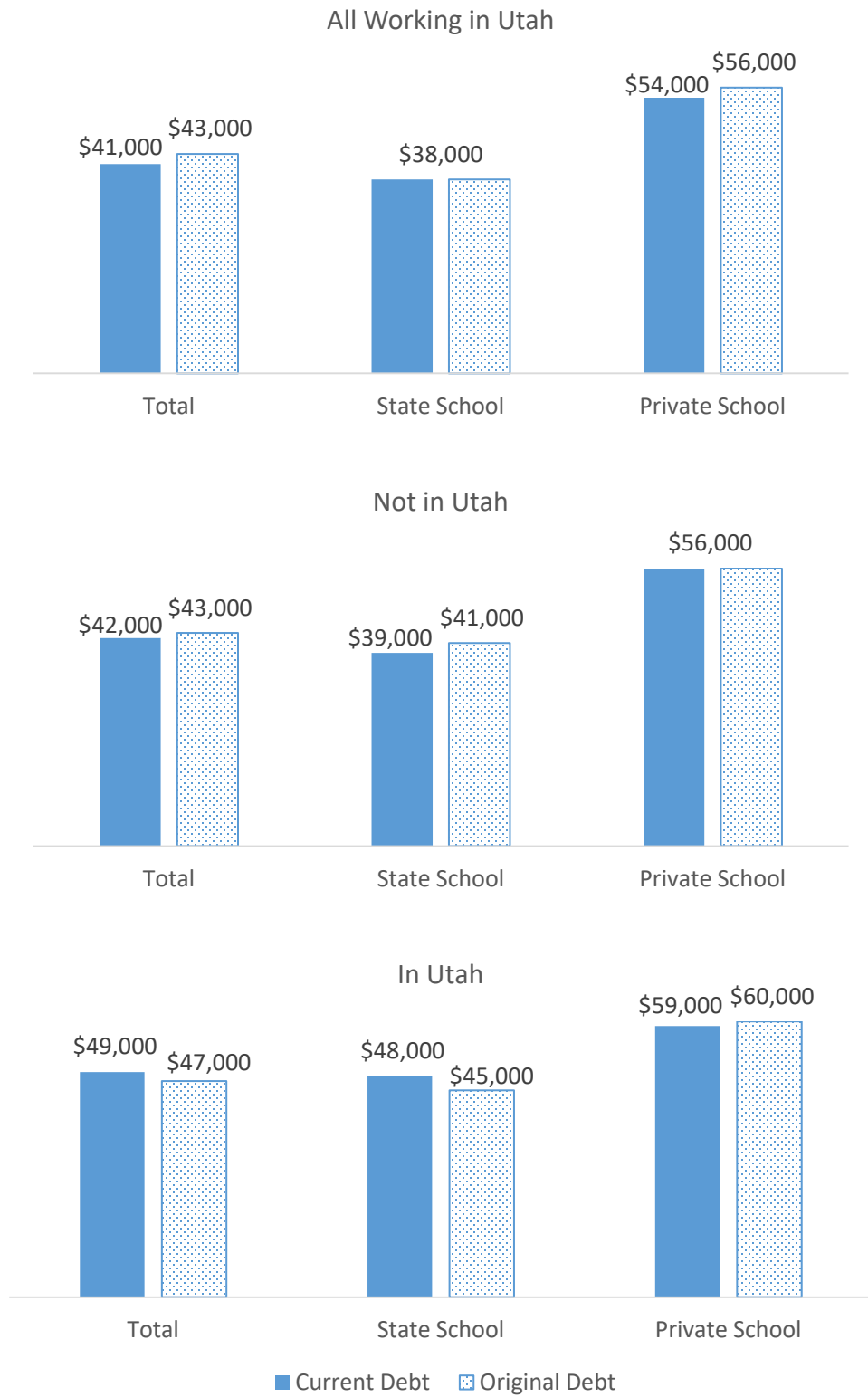
The vast majority (97.8%, 132) of genetic counselors reported currently having debt from their training program. The median amount of educational debt for genetic counseling programs was \$40,000 at the time of graduation and \$39,000 currently for all those working in Utah. Among those living in Utah, both median original and current debt was reported as \$35,000.

**Figure 5: Median Educational Debt**



Overall, those who attended private universities graduated with more debt than those who attended state universities. Among all genetic counselors working in Utah who currently have educational debt, those with degrees from state universities graduated with a median debt of \$38,000 while those who obtained degrees from private universities graduated with a median debt of \$56,000. These differences are consistent when splitting up those who live in Utah and those who do not.

**Figure 6: Median Educational Debt by School Type**



As demonstrated in the figure above, genetic counselors in Utah who attended a public university on average have more debt currently than they did at graduation. Median current debt for this group is between \$3,000 and \$5,000 more than median original debt among genetic counselors living in Utah under the age of 40. Among those not living in Utah, current debt is lower than original debt.

## PRACTICE CHARACTERISTICS

### Genetic Counseling Experience

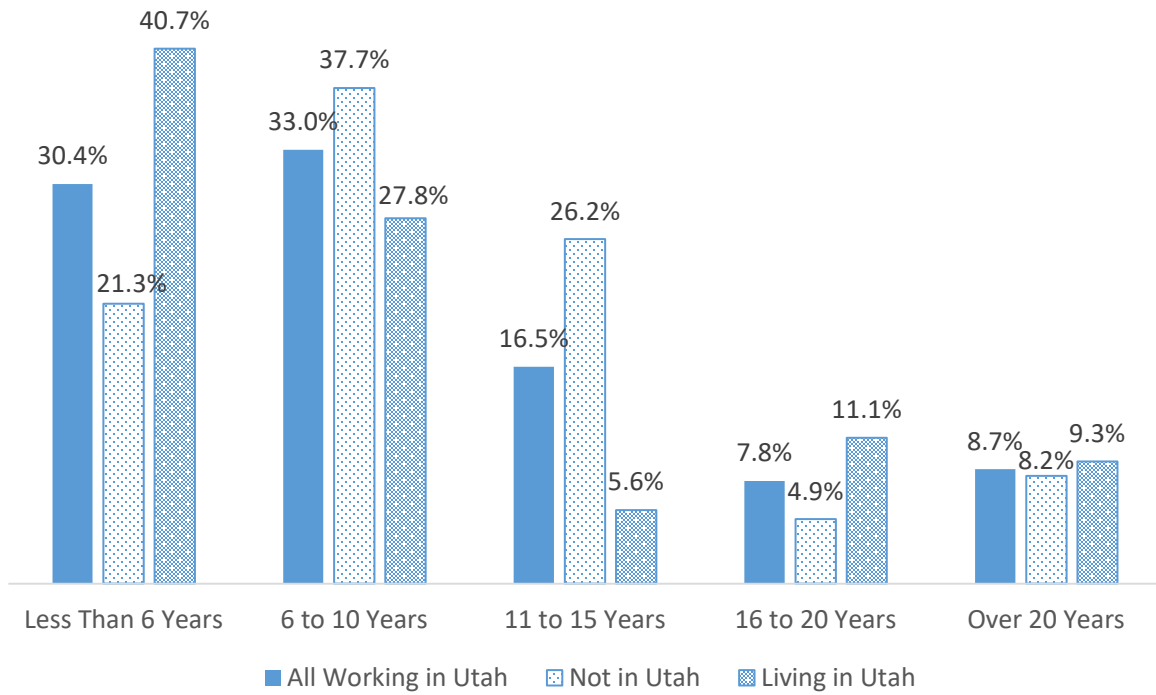
Genetic counselors were asked how many years of experience they had working less than 10 hours per week, 10 to 19 hours per week, 20 to 29 hours per week, and 30 to 40 hours per week. Only 10.5% (14) of all genetic counselors working in Utah reported having any experience working less than 20 hours per week and 12.2% (16) reported having experience working 20 to 29 hours per week. The mean number of years spent in these hour categories is similarly skewed towards 30 to 40 hours per week.

**Table 3: Mean Years of Experience Working x Hours per Week**

	All Working in Utah	Not in Utah	Living in Utah
<b>Less than 10 Hours</b>	0.7	1.2	0.0
<b>10 to 19 Hours</b>	1.3	2.3	0.0
<b>20 to 29 Hours</b>	1.9	3.0	0.3
<b>30 to 40 Hours</b>	9.5	9.9	6.0

When breaking experience working 30 to 40 hours per week down further, it is clear that the workforce on the whole is a fairly new one, particularly among those living in Utah. While over half (59.0%, 36) of those living out of state have fewer than 10 years of experience, over two-thirds (68.5%, 40) of those living in Utah report the same.

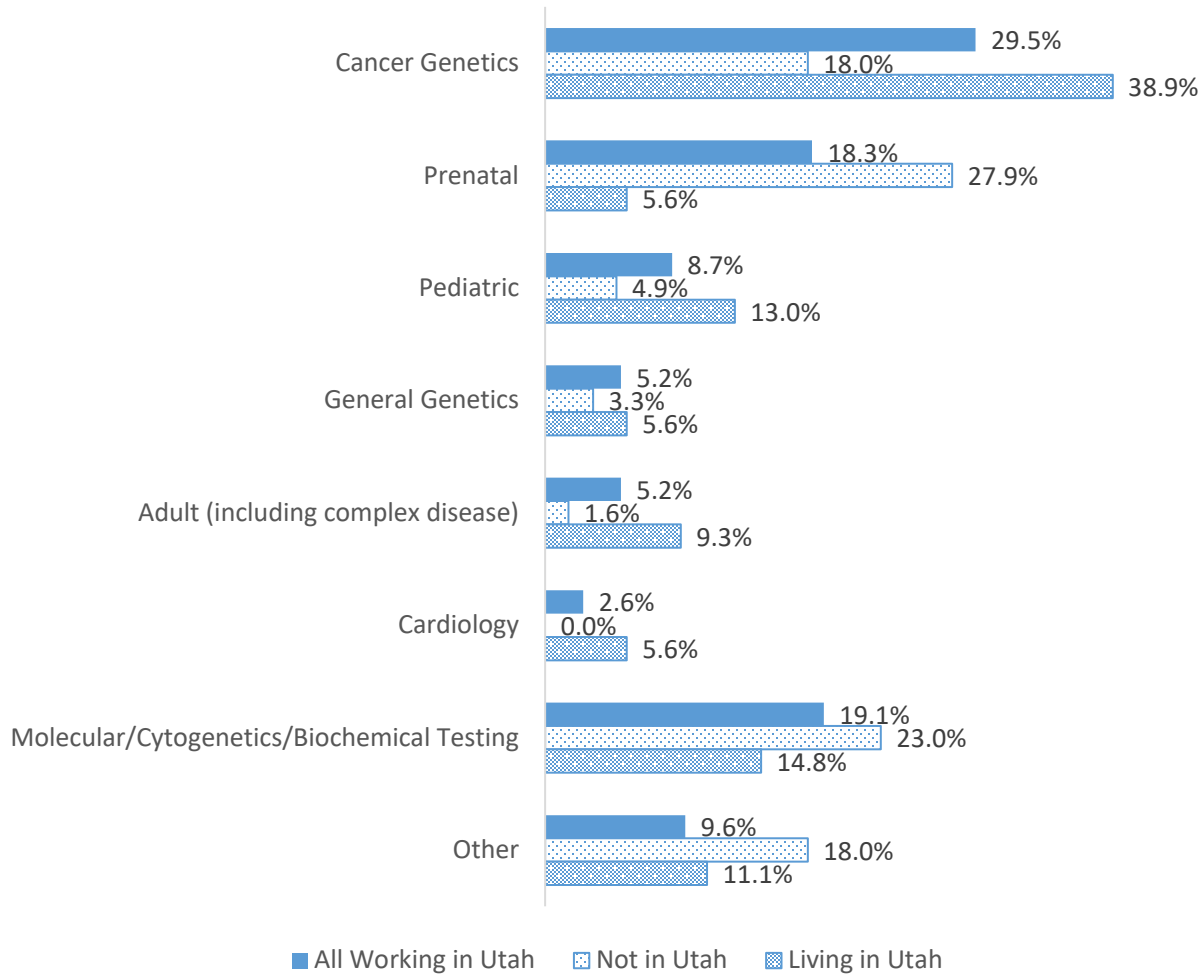
**Figure 7: Years of Experience Working 30 to 40 Hours per Week**



## Specialty

The most common specialty is cancer genetics with 29.5% (40) of all genetic counselors working in Utah and 38.9% (25) of genetic counselors living in Utah working in the field. Genetic counselors outside of Utah primarily cited prenatal (27.9%, 20) and molecular, cytogenetics, and/or biochemical testing.

**Figure 8: Specialty Breakdown**

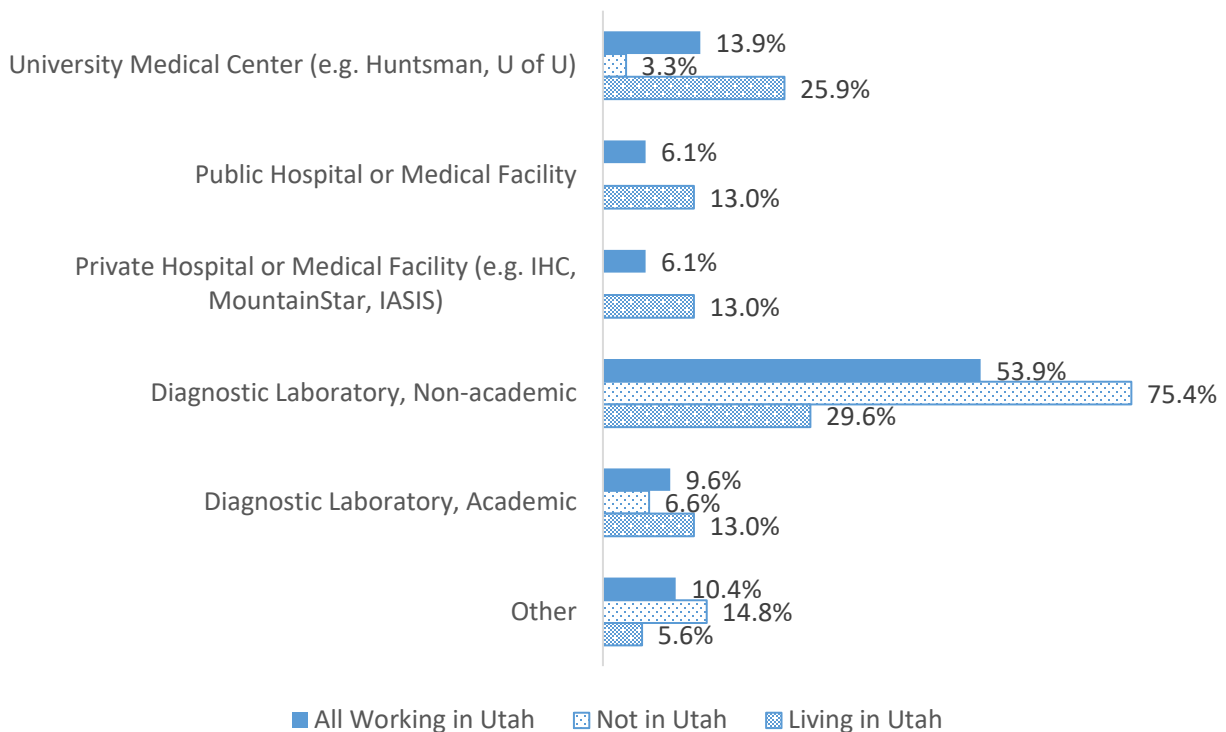




## Practice Setting

When comparing genetic counselors living out of state to those living in Utah, there are stark differences between practice settings. Three-quarters (75.4%, 54) of those out of state cited non-academic diagnostic laboratories as their primary practice setting. While this was also the most common setting among genetic counselors living in Utah as well, responses were much more spread out among the other options with 29.6% (19) citing non-academic diagnostic laboratories, followed closely by university medical centers at 25.9% (16).

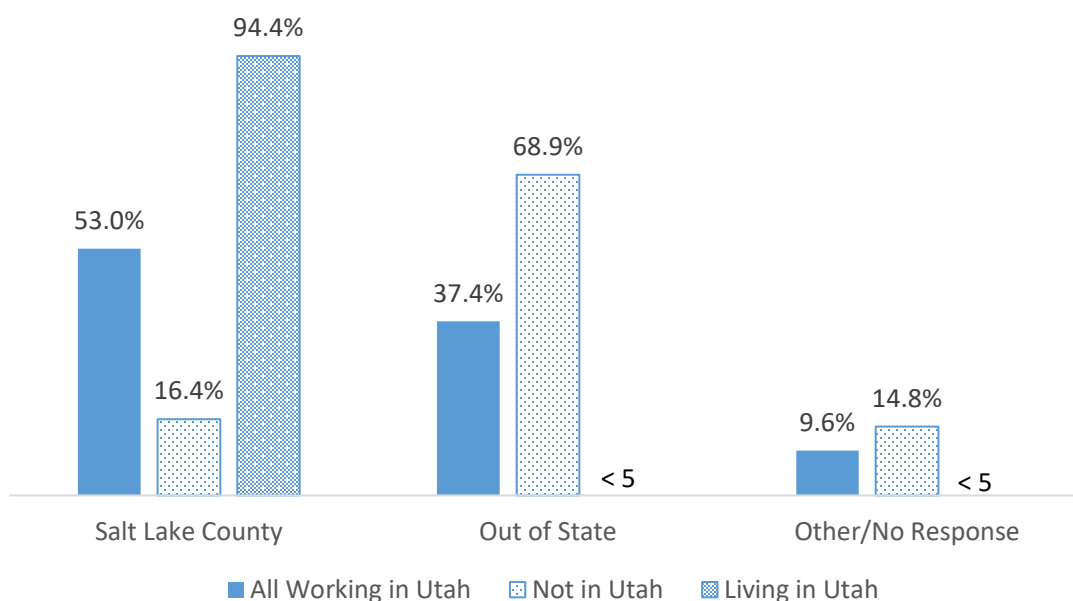
**Figure 9: Practice Setting Breakdown**



## Geographic Distribution

Genetic counselors are centralized within the state with 94.4% (60) of those living in Utah and 16.4% (12) of those living out of state reporting their primary practice is located within Salt Lake County.

**Figure 10: Primary Practice Location**



Although genetic counselors in Utah are located almost exclusively in Salt Lake County, 50.0% (32) provide telegenetic services to patients within the state. Because the survey did not ask where these services were provided or how much time was spent providing remote services, it is impossible to assess at this point whether the current level of telegenetic services is sufficient to meet the needs of Utahns outside of Salt Lake County and the Wasatch Front.

## Practice Hours

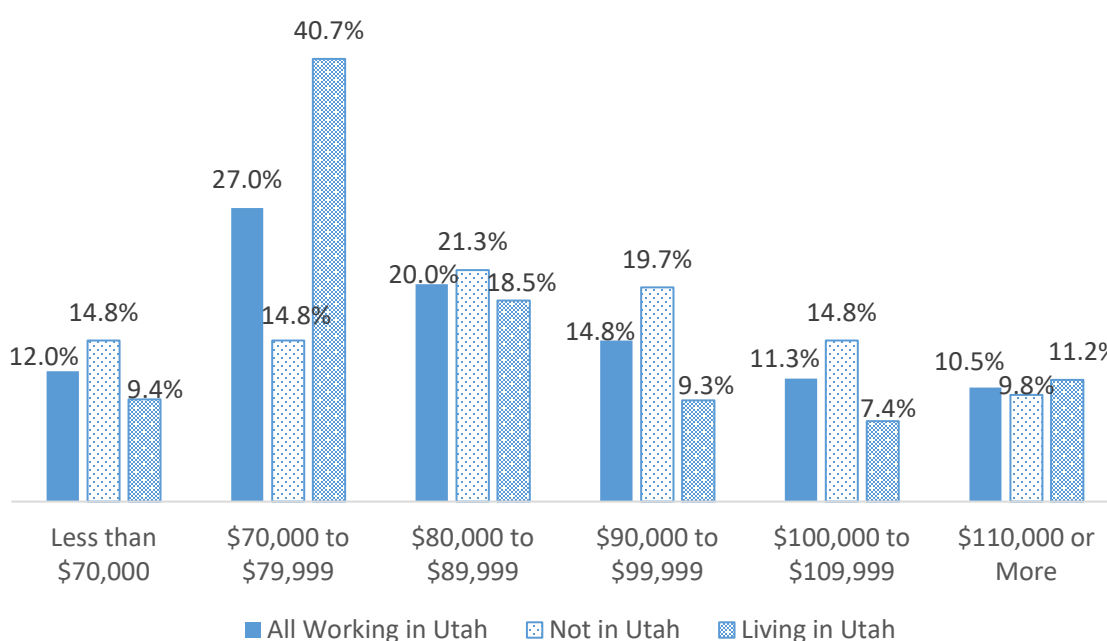
Genetic counselors work an average of 40 hours per week with those not in Utah working an average of 39.2 hours and those living in Utah working an average of 40.8 hours. This includes contract and overtime hours for both primary and secondary settings. Secondary settings were rare with only 7.0% (9) of the workforce at large and 11.1% (5) of the workforce living in Utah reporting a secondary work setting. Overtime was more common among genetic counselors living in Utah than those living out of state with 31.5% (20) and 23.0% (16), respectively. Overall, 75.7% (102) of the entire workforce and 85.2% (54) of the workforce living in Utah worked full

time, compared to 84.0% of the national workforce (National Society of Genetic Counselors).<sup>2</sup> There were no large differences in hours worked when separated out with other variables.<sup>3</sup>

## Income

The median FTE-adjusted<sup>4</sup> income for all genetic counselors working in Utah is \$82,000. That number jumps to \$85,000 for genetic counselors out of state and falls to \$80,000 for genetic counselors living in Utah. The median income nationally was \$75,000 in 2016 (National Society of Genetic Counselors). Unlike those living out of state, genetic counselors living in Utah have a high proportion (40.7%, 26) of individuals making between \$70,000 and \$79,999.

**Figure 11: Income**



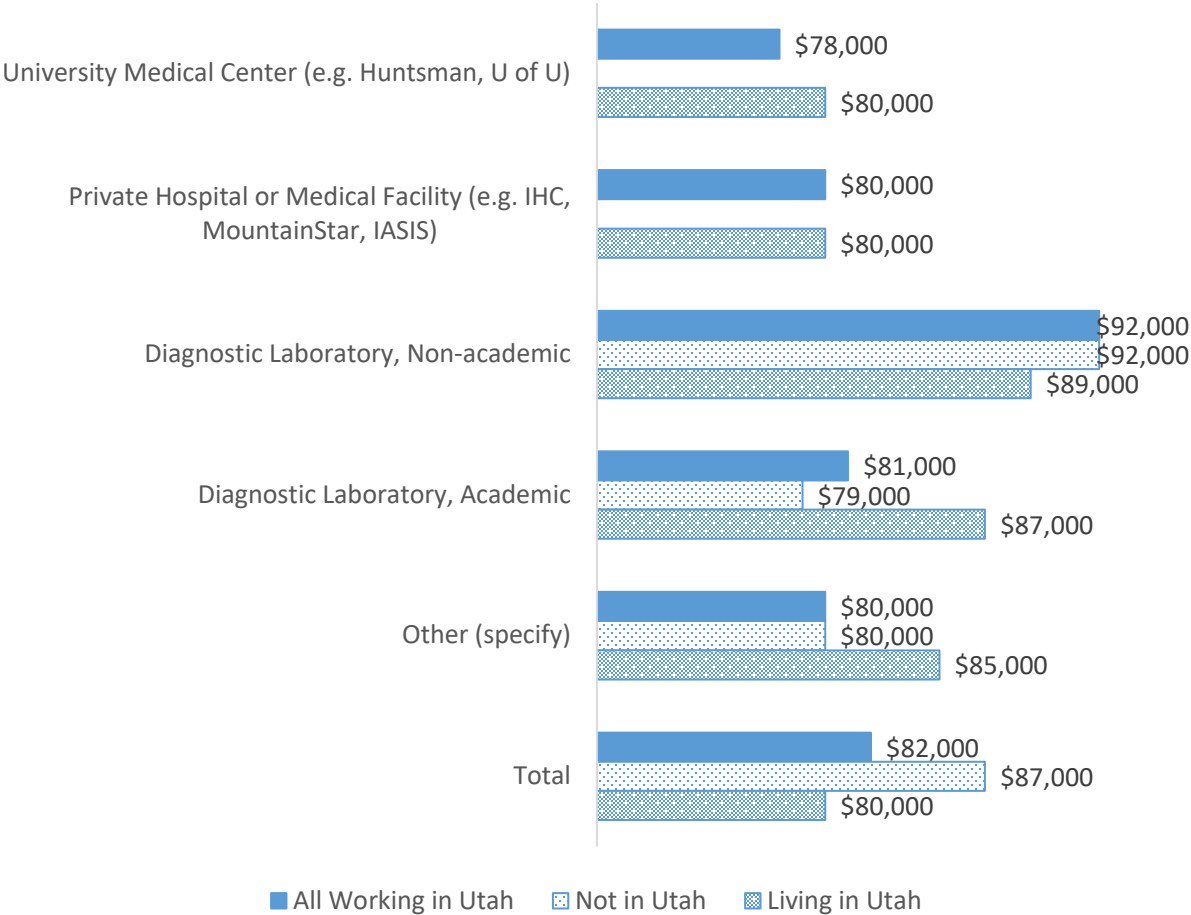
While there were no large differences in income when broken down by specialty, certain settings did have an impact on income, with non-academic diagnostic laboratories outstripping every other setting.

<sup>2</sup> The UMEC report defines full-time as 40 hours per week while the NSGC Professional Status Survey defines full-time as 37.5 hours per week. There were no genetic counselors working in Utah who reported working between 34 and 39 hours per week, thus making the numbers directly comparable.

<sup>3</sup> Analysis included hours worked by setting, specialty, age, gender, income, and race/ethnicity.

<sup>4</sup> 1 FTE is equal to 40 hours worked per week.

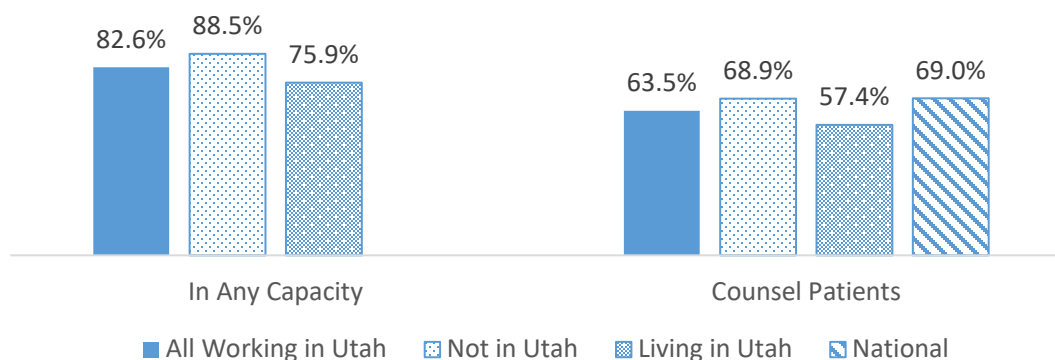
Figure 12: Income by Primary Work Setting



## Practice Activities

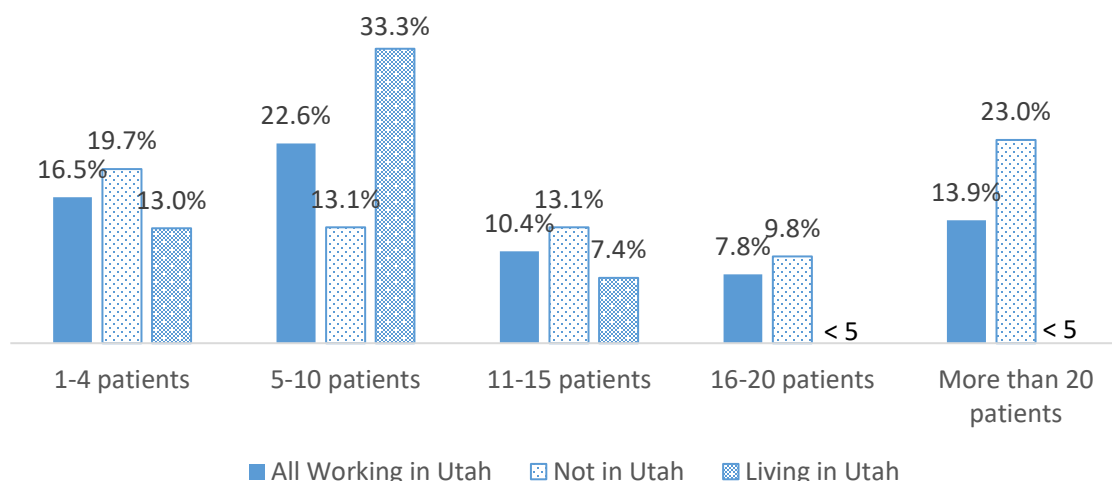
The survey asked respondents if they worked with patients in any capacity and if they specifically counseled patients. Genetic Counselors living in Utah reported both working with and counseling patients at lower rates than those living out of state. Fewer genetic counselors living in Utah reported counseling patients than the national estimate as well.

**Figure 13: Patient Interaction**



Genetic counselors who do counsel patients were asked how many patients they provide counseling to each week. A third (33.3%, 21) of those living in Utah reported seeing between five and ten patients per week, while 23.0% (16) of those out of state counseled more than 20. This discrepancy could be a difference in the nature of patient counseling (e.g. in person vs. remote services), however the survey did not ask more specific questions.

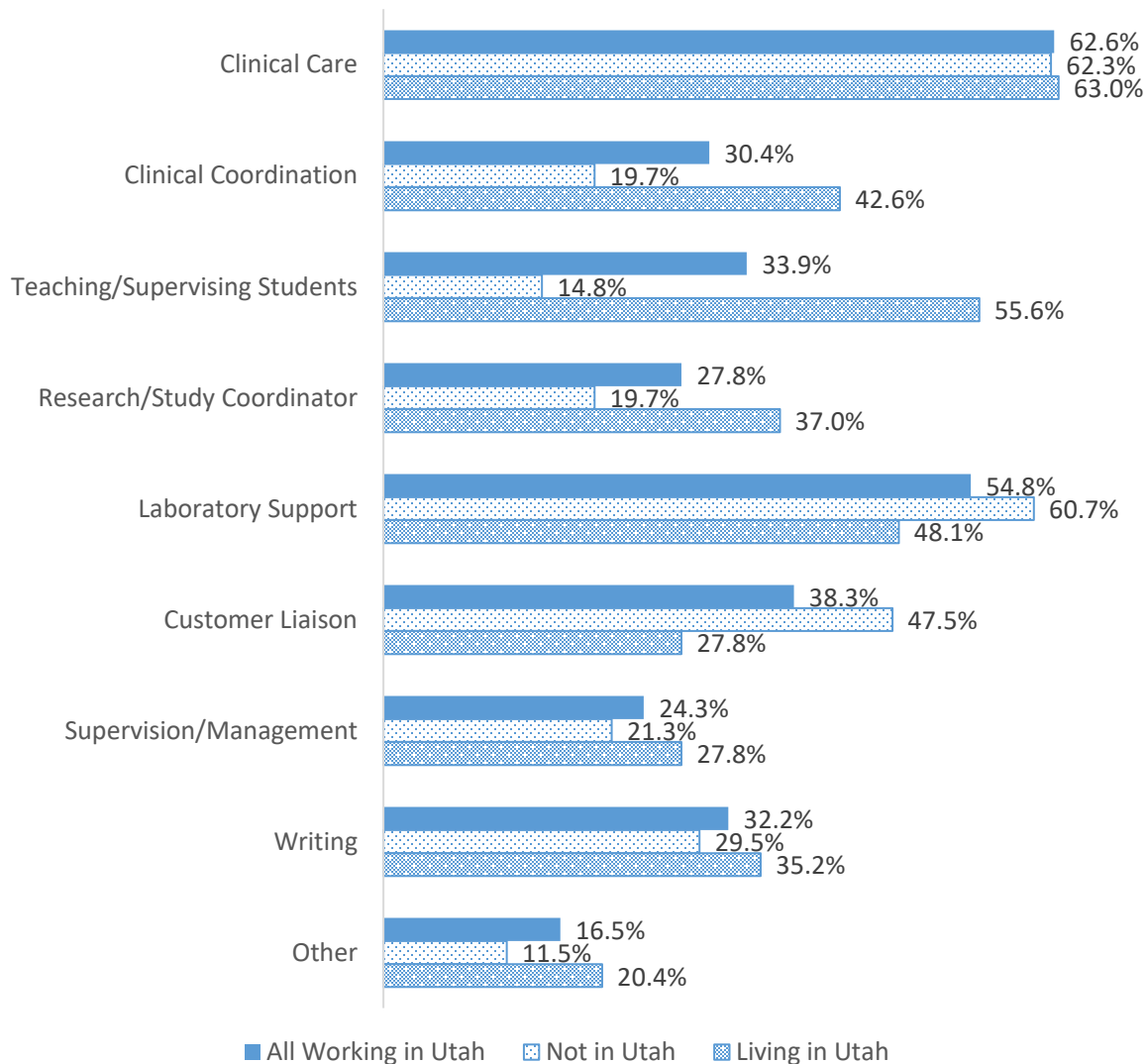
**Figure 14: Patients Counseled per Week<sup>5</sup>**



<sup>5</sup> Discrepancies in the number of patients counseled per week could be due to differences in how respondents in different settings define what is entailed in "counseling."

Respondents were also asked about various other activities including clinical care, laboratory support, and supervision/management, among others. While most categories saw only small differences between those in Utah versus those in other states, large portions of the workforce living in Utah spend time on teaching/supervising students and clinical coordination while a much smaller share of the workforce living out of state does the same. This is likely due to differences in geographic location among the two groups.

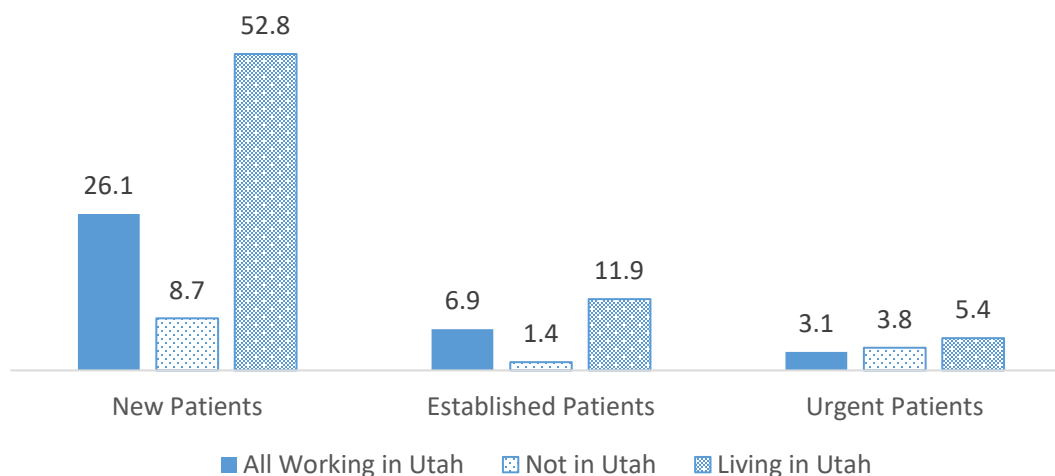
**Figure 15: Percent of Workforce Engaged in Activities**



## Provider Accessibility

The wait time for genetic counselors living in Utah is particularly high for new patients at an average of 52.8 days. While the wait times for established and urgent patients are not nearly as high, they are consistently higher among the workforce living in Utah.

**Figure 16: Mean Wait Time in Days**



The high numbers among those living in Utah are due in large part to clinical genetic counselors, or those who say they counsel patients, as fewer than five respondents who do not counsel patients recorded any wait time. Wait times only among the portion of the workforce living and providing counseling in Utah stand at 54.6 days for new patients, 12.5 days for established patients, and 5.8 days for urgent patients. However, 58.1% (19) of clinical genetic counselors living in Utah report that they can see a new patient within 2 weeks.


**Table 4: Wait Time for Clinical Workforce Living in Utah and National Clinical Workforce**

	Workforce Living in Utah		National Workforce	
	New Patients	Established Patients	New Patients	Established Patients
1-3 Days	16.1%	29.0%	23.4%	33.4%
4-7 Days	19.4%	9.7%	17.2%	21.2%
8-14 Days	22.6%	12.9%	13.9%	14.1%
2-3 Weeks	< 5	< 5	8.0%	5.2%
3-4 Weeks	0.0%	0.0%	3.8%	2.7%
1-2 Months	9.7%	6.5%	8.9%	4.9%
3-4 Months	< 5	< 5	7.3%	1.7%
5-6 Months	12.9%	--	1.3%	0.1%
Longer than 6 Months	< 5	--	2.0%	0.5%

Wait time also varies by specialty, however comparisons between those living in Utah and those living out of state are difficult to make due to the number of respondents. Within Utah, pediatric and adult genetic specialties far outstrip other specialties among those in the state.

**Table 5: Mean Wait Time in Days by Primary Specialty**

Specialty	New Routine Patients	Urgent Patients	Established Patients
	<b>All Working in Utah</b>		
Cancer Genetics	11.3	1.4	7.2
Prenatal	2.0	0.4	1.2
Pediatric	100.9	8.7	33.4
Adult (including complex disease)	175.0	16.6	
Molecular/Cytogenetics/Biochemical Testing	0.6	0.0	0.2
Other	6.9	2.3	4.5
Total	26.4	3.2	7.0
	<b>Not in Utah</b>		
Cancer Genetics	2.8	1.7	2.1
Prenatal	2.0	0.4	1.0
Pediatric			
Adult (including complex disease)			
Molecular/Cytogenetics/Biochemical Testing	0.6	0.0	0.2
Other	7.1	1.1	2.9
Total	8.8	1.4	3.9
	<b>Living in Utah</b>		
Cancer Genetics	17.5	1.1	11.8
Prenatal			
Pediatric	112.8	8.3	
Adult (including complex disease)	175.0	16.6	
Molecular/Cytogenetics/Biochemical Testing			
Other	6.5	4.5	
Total	52.8	5.4	11.9

 Fewer than 5 respondents.



Genetic counselors utilize a number of tools in order to meet the demand for services, including telegenetics, group counseling sessions, electronic medical records, and genetic counseling assistants. At least 50.0% of the workforce living in Utah utilized each of these apart from group counseling sessions.

**Table 6: Tools Used to Meet Patient Demand**

	All Working in Utah	Not in Utah	Living in Utah
Telegenetics	71.3%	80.3%	61.1%
Group Counseling Sessions	13.9%	3.3%	25.9%
Electronic Medical Records	49.6%	37.7%	63.0%
Genetic Counseling Assistants	49.6%	49.2%	50.0%
Other	6.1%	< 5	9.3%

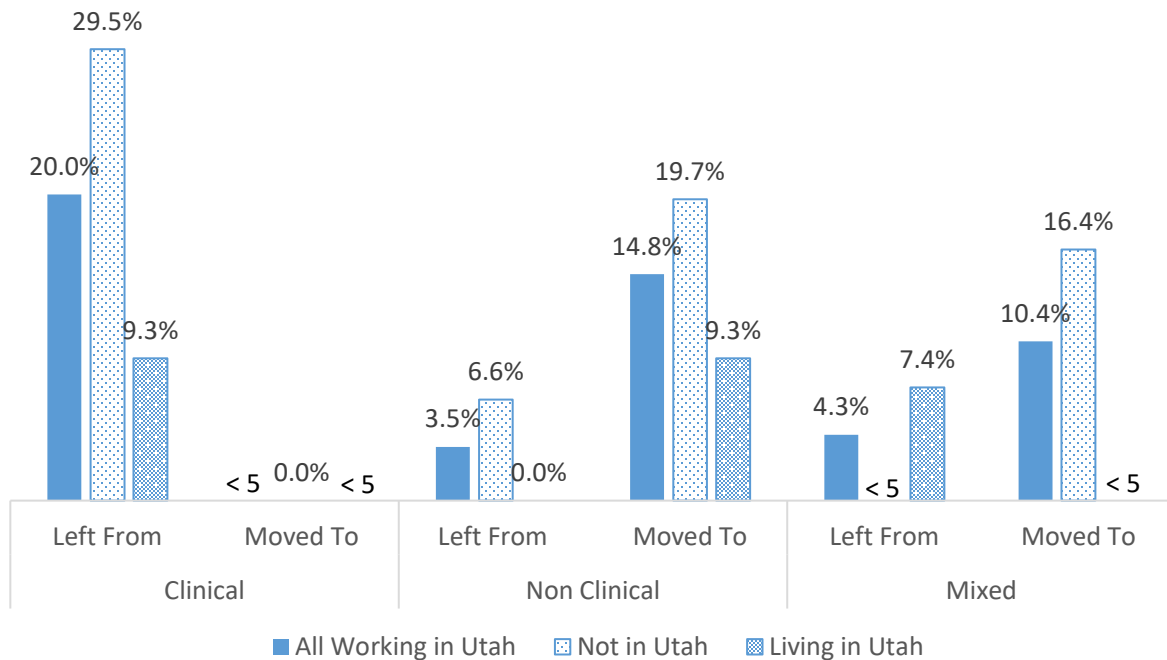
Close to half (48.7%, 66) of the entire workforce provides services in a language other than English, including 57.4% (41) of the workforce living out of state and 38.9% (25) of the workforce living in Utah. Among those in Utah, 20.4% (13) said they were able to provide services in any/all languages and 35.2% (22) specifically said Spanish services were available.

Just under a quarter (22.2%, 14) of the workforce living in Utah bills insurance for genetic counseling services, compared to 8.2% (6) of the workforce outside of Utah. The survey also asked respondents if financial assistance was available for patients and 14.8% (9) of the workforce in Utah and 6.6% (5) of the workforce out of state responded affirmatively.

## Employment Changes

An estimated 16.7% (11) of the workforce in Utah and 29.5% (21) of the workforce out of state has changed employers within the last two years. Many have left clinical and mixed settings, moving to non-clinical settings, culminating in a net loss in clinical and mixed settings. The share of the workforce leaving clinical and mixed settings as well as the share moving to non-clinical settings is particularly high among genetic counselors out of state.

**Figure 17: Settings Left From and Moved To in Last Two Years**

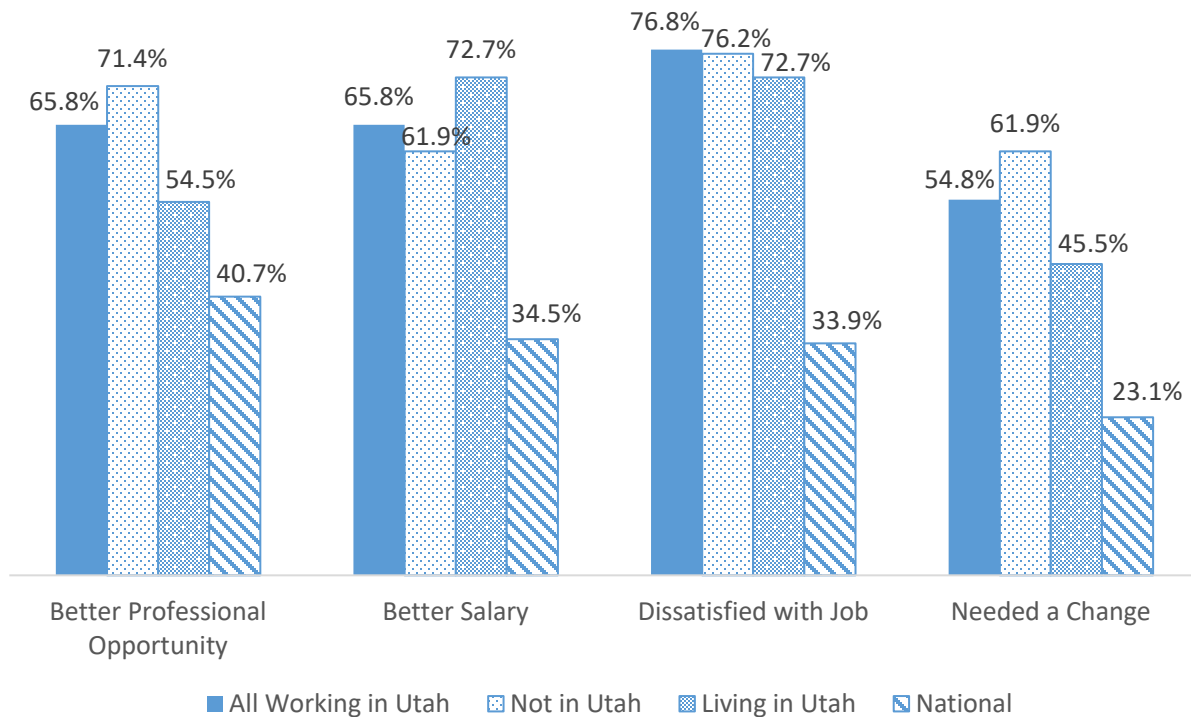


**Table 7: Net Gain or Loss of Setting Type in Last Two Years**

	Net Out of State	Net In Utah
Clinical	-29.5%	-3.7%
Non-Clinical	13.1%	9.3%
Mixed	14.8%	-3.7%

Reasons for switching varied, but the most common among genetic counselors living in Utah, were for a better professional opportunity, better salary, dissatisfaction with their current position, and needing a change. In the NSGC Professional Status Survey, respondents were given many of the same options to choose from with seven additional that were not included on the UMEC survey due to both a lack of responses on the PSS and a lack of space on the UMEC survey. This may explain why the share of the workforce selecting any given option is lower nationally than with the Utah workforce. For example, while the most commonly cited reason among the Utah workforce (dissatisfied with job) came to 76.8% of those who had switched employers, the most commonly cited reason among the national workforce (better professional opportunity) totaled 40.7% of those who had switched employers.

**Figure 18: Most Commonly Cited Reasons for Leaving Last Employer**



## Satisfaction

By and large, the Utah genetic counselor workforce reports high rates of satisfaction with no one reporting they are very dissatisfied and only 6.1% (8) reporting they are somewhat dissatisfied. However, there are differences when comparing genetic counselors out of state and genetic counselors living in Utah, with those living in Utah reporting lower rates of being very satisfied.

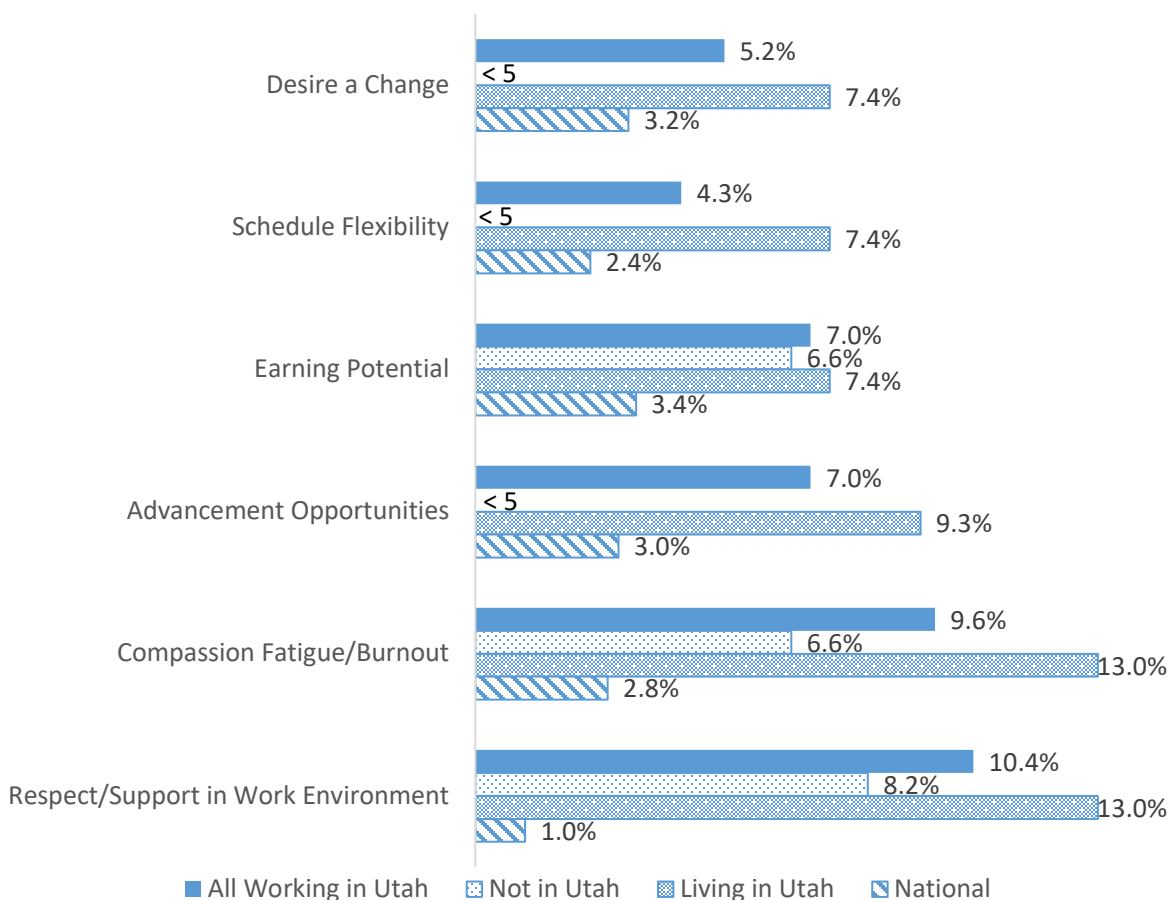
**Table 8: Satisfaction Rates**

	All Working in Utah	Not in Utah	Living in Utah
Very Satisfied	64.3%	70.5%	57.4%
Somewhat Satisfied	28.7%	23.0%	35.2%
Somewhat Dissatisfied	6.1%	< 5	7.4%

Respondents were also asked if they had considered leaving the field of genetic counseling entirely within the last two years for any reason other than retirement. Overall, 17.4% (23) indicated that they had considered leaving. This included 13.1% (9) of those living out of state and 22.2% (14) of those living in Utah.

Reasons for this consideration are diverse, with compassion fatigue/burnout and respect/support in the work environment being the most common among the workforce living in Utah with 13.0% (8).

**Figure 19: Reasons for Considering Leaving Profession**



## TRAINING CAPACITY

The only genetic counseling training program in Utah was established in 2005 and is located at the University of Utah and has graduated seven students each year since 2011 (the classes of 2007, 2008, and 2009 each had six students while the class of 2010 had 8) for a total of 75 students. By its own estimates, the University of Utah Genetic Counseling Program retains 45.0% of its students immediately after graduation, or an average of three students per year. As a baseline study, it is impossible to determine how this has shaped the workforce over time, however only 29.6% (19) of the workforce living in Utah attended the University of Utah, indicating that the long-term retention of Utah-trained genetic counselors is closer to 25.3% and that the majority of the workforce is being recruited from out of state.

## WORKFORCE PROJECTIONS

The projection model will not focus on the entire workforce, rather the clinical genetic counselors living in the state. The clinical provider to 100,000 population ratio currently stands at 1.2. While there is no estimate of clinical genetic counselors per 100,000 nationally, Utah has 2.0 genetic counselors living in the state per 100,000 while national estimates hover around 1.0 (United States Department of Labor). It is not assumed that 1.2 clinical genetic counselors is a surplus, especially when considering the wait time for clinical counselors in the state. Indeed, national literature points to a shortage of clinical genetic counselors, though it is unclear what the ideal ratio is (Genetic Counselor Workforce Working Group). The following projection makes the assumption that the Utah ratio of 1.2 per 100,000 should be the minimum.

The data on retirement and hour reduction was analyzed both in terms of all genetic counselors living in Utah and clinical genetic counselors living in Utah. Because the workforce itself is small, separating out the clinical providers proved difficult to apply to the entire workforce because of the minute numbers involved. Therefore, analysis for this information was done using both clinical and non-clinical providers then reduced to the percentage that clinical providers make up of the entire workforce (57.4%).

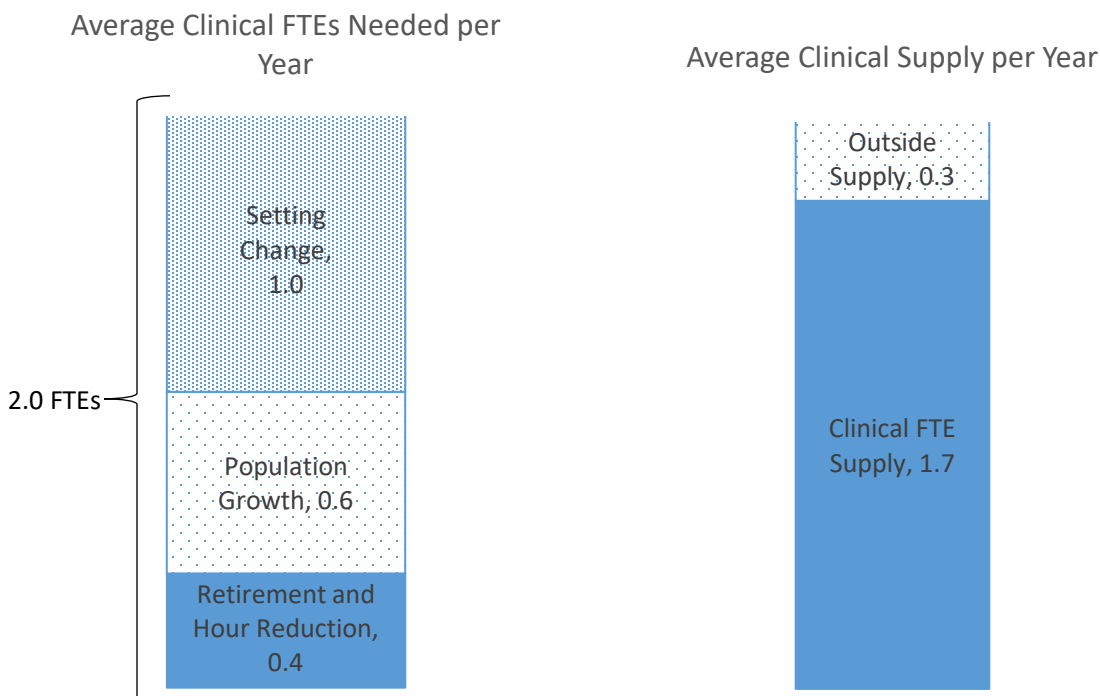
An estimated 29.6% (19) of the workforce living in Utah plans to reduce their hours before retirement with 13.0% (8) planning on reducing their hours within the next 10 years. However, 9.3% (6) had already reduced their hours within the last five years, the main reason being to focus on or start a family. If we assume an average of 9.3% will reduce their hours every five years, 18.6% of the workforce could reduce their hours over the next 10 years. The average number of hours this reduction lead to was 12 per person per week, or a loss of 0.3 FTEs per year across the entire workforce living in Utah.

As for FTE loss due to retirement, fewer than five genetic counselors living in Utah plan on retiring within the next 10 years. With retirement and hour reduction, it is estimated that the workforce living in Utah will be reduced by 0.7 FTEs per year. Assuming 57.4% of those FTEs are working clinically, the total clinical FTE loss per year is 0.4.

In addition to replacing FTEs due to hour reduction and retirement, the workforce must keep up with population growth in order to maintain 1.2 clinical genetic counselors per 100,000. This will require an average of 0.6 FTEs per year over the next 10 years. Setting changes must also be considered. As mentioned above, clinical settings in Utah had a net loss of 3.7% over the last two years due to the workforce moving primarily into non-clinical settings. If this trend continues, it is estimated that 1.0 FTE will be needed per year in order to mitigate that loss, bringing the total estimated clinical FTEs needed per year to 2.0.

With the University of Utah graduating seven students per year, 45.0% of whom stay in the state immediately after graduation, and assuming 57.4% will work in a clinical setting, supply for clinical genetic counselors will be an estimated 1.7 FTEs per year. This falls just shy of the 2.0 needed to maintain the current 1.2 per 100,000, pointing towards a need to recruit genetic counselors from out of state.

**Figure 20: Projection Model**



## CONCLUSION

Although Utah has a higher ratio of genetic counselors per 100,000 people than the national average, it is unclear whether this ratio is adequate or not, particularly when looking at wait times for clinical genetic counselors. The current number of Utah graduates will likely be inadequate to keep current ratios constant, meaning Utah will need to continue to recruit genetic counselors from out of state or increase the number of students trained in Utah each year. As the population and patient education on genetics and genetic counseling increases, demand will increase as well, exacerbating possible shortage issues already in the workforce.

## POLICY RECOMMENDATIONS

- 1. Change the Reimbursement Rates for Genetic Counselors.** Genetic counselors in Utah can and often do bill independently for their services, however this code does not accurately reflect all the patient interaction a genetic counselor may have and many insurance providers do not recognize this code and is therefore poorly reimbursed. This coupled with the fact that health systems often do not understand the benefits of having a genetic counselor on staff and part of a care team, including freeing up time for physicians and providing specialized expertise, is having a negative impact on the workforce. The UMEC recommends any effort to push for licensed genetic counselors to be more widely reimbursed both on a national and state level.
- 2. Increase Access to Clinical Genetic Counselors.** Although Utah has a higher than average clinical provider rate per 100,000 population than national numbers, demand for genetic counselors nationally is high and it is unclear whether one genetic counselor per 100,000 people is sufficient. Wait times for patients are higher in Utah than the national average and the mean wait time for new patients to see a genetic counselor in Utah is close to two months.
  - a. Support an increase in the amount of funding given to the University of Utah's Genetic Counseling Program in order to increase class size.
  - b. Support provider education on how to utilize genetic counselors.
  - c. Increase access to genetic counseling via telehealth in order to serve patients outside of the Wasatch Front.
  - d. Support state and federally funded loan repayment programs for genetic counselors who provide clinical genetic counseling services, including those who provide counseling via telehealth.
  - e. Support efforts to provide incentives for licensed genetic counselors to train genetic counseling students in clinical settings as well as efforts to change such training requirements with the Accreditation Council for Genetic Counseling.
- 3. Enhance Data Collection.** With this baseline analysis, the UMEC has begun the task of tracking the genetic counselor workforce, however additional data is needed in order to make an accurate prediction of the demand for genetic counselors, particularly those who directly interact with patients.
  - a. Continue to conduct regular surveys of the genetic counselor workforce.
    - i. Gather data on how much time genetic counselors living outside of the state spend in providing remote services to patients in Utah.
    - ii. Gather data on how much time genetic counselors spend providing remote services to patients in rural Utah.
  - b. Increase retention data to include whether Utah genetic counselor graduates find employment in clinical or non-clinical settings.
  - c. Conduct employer surveys and track the workforce that moves from clinical settings to mixed and non-clinical settings.

- d. Support efforts to request legislative changes in order to incorporate the UMEC survey into the DOPL licensing process.
- 4. **Promote a More Diverse Workforce.** Only 13.1% of genetic counselors living in Utah identifies as a racial or ethnic minority, compared to 19.7% of the population in the state, with even larger gaps in the male workforce. Increasing diversity can help ensure that the genetic counseling needs of an increasingly diverse state are being met.
  - a. Encourage collaboration with organizations such as United Way, Healthinsight and the Utah Department of Health, local high schools, etc. to encourage minority and male youth to consider a career in the genetic counseling field.



## APPENDIX A – BIBLIOGRAPHY

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## APPENDIX B – SURVEY INSTRUMENT



Utah Medical Education Council  
230 South 500 East, Suite 210  
Salt Lake City, Utah 84102

«FULL\_NAME»

«ADDR\_LINE\_1» «ADDR\_LINE\_2»

«CITY», «STATE», «ZIP»

### Utah Medical Education Council 2017 Genetic Counselor Workforce Survey

Dear «Prefix» «LAST\_NAME»,

The Utah Medical Education Council ([www.utahmec.org](http://www.utahmec.org)) was created in 1997 with the mission to conduct healthcare workforce research. The UMEC advises on Utah's medical workforce needs, influences graduate medical education financing policies, and works with state legislators, universities, and numerous healthcare organizations to ensure that Utah's healthcare workforce is sufficient to serve Utah's communities.

The UMEC, in conjunction with the Utah Department of Health, Utah Division of Occupational and Professional Licensing, the University of Utah, and the Association for Utah Genetic Counselors would like to invite you to participate in the first comprehensive survey of the genetic counselor workforce in Utah. Your participation in this survey is crucial for determining the active genetic counselor workforce makeup and distribution throughout the state. This information is critical for schools of genetic counseling, the Utah legislature, and countless health care organizations to prepare for current and future workforce needs. We are committed to maintaining your privacy. Only de-identified, aggregate data will be published.

For any questions regarding this survey please contact the UMEC at 801-526-4567 or by email at [jennac@utah.gov](mailto:jennac@utah.gov). Please return the completed survey to the UMEC within 30 days in the enclosed postage paid envelope.

Sincerely,

Richard Campbell  
Executive Director  
Utah Medical Education Council

Karin Dent, MS, LCGC  
Director, Graduate Program in Genetic Counseling  
University of Utah Health Sciences

Heather Sarin, CPM, MBA, MPH, PMP  
Cancer Genomic Program Manager  
Utah Department of Health

Katie Dunn, MS, CGC  
Board Representative  
Utah Association for Genetic Counselors



#### Council Members

##### Utah Medical Education Council

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Katie Dunn, MS, CGC

Michelle Landon, MS, CGC

Nancy Rose, MD

Heather Sarin, CPM, MBA, MPH, PMP

Lauren Wallace, GC

## Utah Genetic Counselor Workforce Survey 2017

Q1 What is your PRIMARY practice status? (Please check ONE of the following)

- ☐ Living in Utah and providing services in Utah
 ☐ Living in Utah and DO NOT provide services in Utah
 ☐ Other (specify)
- ☐ Living out of state and providing remote services in Utah
 ☐ Living out of state and DO NOT provide remote services in Utah

Other (please specify):

Q2 If you DO NOT PROVIDE IN-PERSON OR REMOTE SERVICES IN UTAH, on a scale of 1-5 (1 being the most influential and 5 being the least influential), please rank the following factors that have influenced your decision to not provide services in Utah:

	1 - Most influential	2	3	4	5 - Least influential
Climate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wages/Pay scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work Environment/Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifestyle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify):

Q3 If you DO NOT PROVIDE IN-PERSON OR REMOTE SERVICES IN UTAH, please specify why you maintain a Utah license:

**IF YOU DO NOT PROVIDE ANY SERVICES IN UTAH STOP HERE AND RETURN THE SURVEY. THANK YOU.**

Q4 If you PROVIDE IN-PERSON OR REMOTE SERVICES IN UTAH, on a scale of 1-5 (1 being the most influential and 5 being the least influential), please rank the following factors that have influenced your decision to practice in Utah:

	1 - Most influential	2	3	4	5 - Least influential
Utah Genetic Counseling Graduate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pay scale/Wages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of Living	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifestyle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Practice Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify):

### Demographics

Q5 Are you of Hispanic ethnicity? ☐ Yes ☐ No

Q6 What is your race?

- ☐ American Indian/Alaska Native
 ☐ Black/African American
 ☐ Asian
- ☐ Native Hawaiian/Pacific Islander
 ☐ White
 ☐ Other (specify)

Other (please specify):

Q7 Please describe the area where you spent the majority of your upbringing (when you lived there):

- ☐ Rural
 ☐ Suburban
 ☐ Urban

State:



## Education

Q8 Please provide the following information about the institution from which you received your highest genetic counseling degree:

☐ State School ☐ Private School

State:   
Year of Graduation:

Q9 Please mark the amount of educational debt you CURRENTLY have from your genetic counseling program (exclude pre-genetic counseling and non-educational debt)

<input type="checkbox"/> \$0.00	<input type="checkbox"/> \$20,000 to \$29,999	<input type="checkbox"/> \$50,000 to \$59,999	<input type="checkbox"/> \$80,000 to \$89,999
<input type="checkbox"/> \$0.01 to \$9,999	<input type="checkbox"/> \$30,000 to \$39,999	<input type="checkbox"/> \$60,000 to \$69,999	<input type="checkbox"/> \$90,000 to \$99,999
<input type="checkbox"/> \$10,000 to \$19,999	<input type="checkbox"/> \$40,000 to \$49,999	<input type="checkbox"/> \$70,000 to \$79,999	<input type="checkbox"/> \$100,000 or more

Q10 Please mark the amount of educational debt you had AT THE TIME OF GRADUATION from your genetic counseling program (exclude pre-genetic counseling and non-educational debt)

<input type="checkbox"/> \$0.00	<input type="checkbox"/> \$20,000 to \$29,999	<input type="checkbox"/> \$50,000 to \$59,999	<input type="checkbox"/> \$80,000 to \$89,999
<input type="checkbox"/> \$0.01 to \$9,999	<input type="checkbox"/> \$30,000 to \$39,999	<input type="checkbox"/> \$60,000 to \$69,999	<input type="checkbox"/> \$90,000 to \$99,999
<input type="checkbox"/> \$10,000 to \$19,999	<input type="checkbox"/> \$40,000 to \$49,999	<input type="checkbox"/> \$70,000 to \$79,999	<input type="checkbox"/> \$100,000 or more

Q11 How many years of experience as a master's level genetic counselor do you have...

As < .25 FTE (less than 10 hrs/week)	<input type="text"/>	As .5 to .725 FTE (20 to 29 hrs)	<input type="text"/>
As .25 to .475 FTE (10 to 19 hrs)	<input type="text"/>	As .75 to 1 FTE (30 to 40 hrs)	<input type="text"/>

## Practice Settings and Characteristics

Q12 Please select the option that best describes your PRIMARY practice setting

<input type="checkbox"/> University Medical Center (e.g. Huntsman, U of U)	<input type="checkbox"/> Private Hospital or Medical Facility (e.g. IHC, MountainStar, IASIS)	<input type="checkbox"/> Diagnostic Laboratory, Non-academic	<input type="checkbox"/> Physician's Private Practice
<input type="checkbox"/> Public Hospital or Medical Facility		<input type="checkbox"/> Diagnostic Laboratory, Academic	<input type="checkbox"/> Other (specify)

Other (please specify):

Q13 Please select the option that best describes your SECONDARY practice setting (if applicable)

<input type="checkbox"/> University Medical Center (e.g. Huntsman, U of U)	<input type="checkbox"/> Private Hospital or Medical Facility (e.g. IHC, MountainStar, IASIS)	<input type="checkbox"/> Diagnostic Laboratory, Non-academic	<input type="checkbox"/> Physician's Private Practice
<input type="checkbox"/> Public Hospital or Medical Facility		<input type="checkbox"/> Diagnostic Laboratory, Academic	<input type="checkbox"/> Other (specify)

Other (please specify):

Q14 Please select the ONE option that best describes your PRIMARY specialty

<input type="checkbox"/> Cancer Genetics	<input type="checkbox"/> General Genetics	<input type="checkbox"/> Cardiology	<input type="checkbox"/> Education; Public or Professional
<input type="checkbox"/> Prenatal	<input type="checkbox"/> Adult (including complex disease)	<input type="checkbox"/> Molecular/Cytogenetics/Biochemical Testing	<input type="checkbox"/> Other (specify)
<input type="checkbox"/> Pediatric			

Other (please specify):

Q15 Do you work with patients in any capacity as part of your regular job responsibilities? ☐ Yes ☐ No

Q16 Do you counsel patients as part of their regular health care? ☐ Yes ☐ No

Q16a If YES, on average how many patients do you provide counseling to per week?

<input type="checkbox"/> 1-4 patients	<input type="checkbox"/> 5-10 patients	<input type="checkbox"/> 11-15 patients	<input type="checkbox"/> 16-20 patients	<input type="checkbox"/> More than 20 patients
---------------------------------------	--	---	---	--

Q16b If YES, on average, how many days must patients wait for an appointment?

New routine patients:

Established patients:

Urgent patients:

Q17 Please select the response indicating your average annual GROSS compensation (before taxes)

☐ Less than \$20,000

☐ \$60,000 to \$69,999

☐ \$110,000 to \$119,999

☐ \$160,000 to \$169,999

☐ \$20,000 to \$29,999

☐ \$70,000 to \$79,999

☐ \$120,000 to \$129,999

☐ \$170,000 to \$179,999

☐ \$30,000 to \$39,999

☐ \$80,000 to \$89,999

☐ \$130,000 to \$139,999

☐ \$180,000 to \$189,999

☐ \$40,000 to \$49,999

☐ \$90,000 to \$99,999

☐ \$140,000 to \$149,999

☐ \$190,000 to \$199,999

☐ \$50,000 to \$59,999

☐ \$100,000 to \$109,999

☐ \$150,000 to \$159,999

☐ \$200,000 or more

Q18 Please indicate the practice CITY, ZIP CODE, HOURS CONTRACTED and OVERTIME per week of your PRIMARY and SECONDARY practice settings (employer location)

Primary City:

Secondary City:

Primary Zip Code:

Secondary Zip Code:

Primary CONTRACT

Hours/week:

Secondary CONTRACT

Hours/week:

Primary OVERTIME

Hours/week:

Secondary OVERTIME

Hours/week:

Q19 Do you provide services in any language other than English with or without the assistance of a translator?

☐ Yes

☐ No

If yes, please list the language(s):

Q20 What percentage of your time do you spend in the following categories each week? (Total should be 100%)

Clinical Care:

Customer Liaison:

Clinical Coordination:

Supervision/Management:

Teaching/Supervising Students:

Writing:

Research/Study Coordinator:

Other (percent):

Laboratory Support:

Other (please specify):

Q21 Do you bill insurance for your genetic counseling services? ☐ Yes ☐ No

Q22 If YES, is financial assistance available at your PRIMARY setting for genetic counseling services for those who can't pay?

☐ Yes

☐ No

Q23 What tools have you used in the past two years to meet the demand for your genetic counseling services? (Select all that apply)

☐ Telegenetics (telemedicine)

☐ Electronic medical records (EMR)

☐ Other (specify)

☐ Group counseling sessions

☐ Genetic Counseling Assistants

Other (please specify):

Q22a If you selected Telegenetics above, how do you use Telegenetics/telemedicine?

☐ Provide services in Utah

☐ Provide services out of Utah

### **Retention and Satisfaction**

Q24 Have you voluntarily changed employers/settings in the last two years?

☐ Yes

☐ No

Q24a If YES, what type of setting did you move from and to? (One response per column)

	Left from	Moved to
Clinical	<input type="checkbox"/>	<input type="checkbox"/>
Non-clinical	<input type="checkbox"/>	<input type="checkbox"/>
Mixed	<input type="checkbox"/>	<input type="checkbox"/>

Q24b If YES, what factors influenced your decision to leave your last employer/setting? (Select all that apply)

- |  |  |  |  |
|--|--|--|--|
| <input type="checkbox"/> Better professional opportunity | <input type="checkbox"/> Better location/more convenient | <input type="checkbox"/> Career change                 | <input type="checkbox"/> Desired full-time |
| <input type="checkbox"/> Better salary                   | <input type="checkbox"/> Needed a change                 | <input type="checkbox"/> Moved to different city/state | <input type="checkbox"/> Desired part-time |
| <input type="checkbox"/> Dissatisfied with job           | <input type="checkbox"/> Family/personal reason          | <input type="checkbox"/> New graduate                  | <input type="checkbox"/> Other             |

Q25 Have you considered leaving the field of genetic counseling in the last two years (other than retirement)?

☐ Yes ☐ No

Q25a If YES, what factors have influenced your consideration of leaving the field of genetic counseling? (Select all that apply)

- |  |   |   |   |
|--|---|---|---|
| <input type="checkbox"/> Desire a change           | <input type="checkbox"/> Schedule flexibility           | <input type="checkbox"/> Respect/support received in work environment | <input type="checkbox"/> Location of job/work commute |
| <input type="checkbox"/> Earning potential         | <input type="checkbox"/> Amount of job responsibilities | <input type="checkbox"/> Autonomy                                     | <input type="checkbox"/> Moved to a different city    |
| <input type="checkbox"/> Advancement opportunities | <input type="checkbox"/> Compassion fatigue/burnout     | <input type="checkbox"/> Job availability/opportunities               | <input type="checkbox"/> Amount of patients           |
| <input type="checkbox"/> Focus on/start a family   |   |   | <input type="checkbox"/> Other (specify)              |

Other (please specify):

Q26 Have you reduced your total hours working as a genetic counselor in the past five years?

☐ Yes ☐ No

Q26a If YES, what were the reasons for this reduction? (Select all that apply)

- |  |   |   |   |
|--|---|---|---|
| <input type="checkbox"/> Desire a change           | <input type="checkbox"/> Schedule flexibility           | <input type="checkbox"/> Respect/support received in work environment | <input type="checkbox"/> Location of job/work commute |
| <input type="checkbox"/> Earning potential         | <input type="checkbox"/> Amount of job responsibilities | <input type="checkbox"/> Autonomy                                     | <input type="checkbox"/> Moved to a different city    |
| <input type="checkbox"/> Advancement opportunities | <input type="checkbox"/> Compassion fatigue/burnout     | <input type="checkbox"/> Job availability/opportunities               | <input type="checkbox"/> Amount of patients           |
| <input type="checkbox"/> Focus on/start a family   |   |   | <input type="checkbox"/> Other (specify)              |

Other (please specify):

Q26b If YES, how many hours per week did you work before and after this reduction? (One answer per row)

	10 or fewer hours	11-20 hours	21-30 hours	31-40 hours
Before reduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After reduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q27 At what age are you planning to retire completely from genetic counseling?

Q28 Are you planning to reduce hours before full retirement?

☐ Yes ☐ No

Q28a If YES, in how many years do you plan to reduce your hours before full retirement?

- |   |                                      |                                      |   |
|---|--------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> Fewer than 5 years | <input type="checkbox"/> 11-15 years | <input type="checkbox"/> 21-25 years | <input type="checkbox"/> 31 to 35 years     |
| <input type="checkbox"/> 5-10 years         | <input type="checkbox"/> 16-20 years | <input type="checkbox"/> 36-30 years | <input type="checkbox"/> More than 35 years |

Q29 How satisfied are you with your current work arrangement?

☐ Very Satisfied ☐ Somewhat Satisfied ☐ Somewhat Dissatisfied ☐ Very Dissatisfied

**Thank you for your participation. Please return the survey in the enclosed envelope.**

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