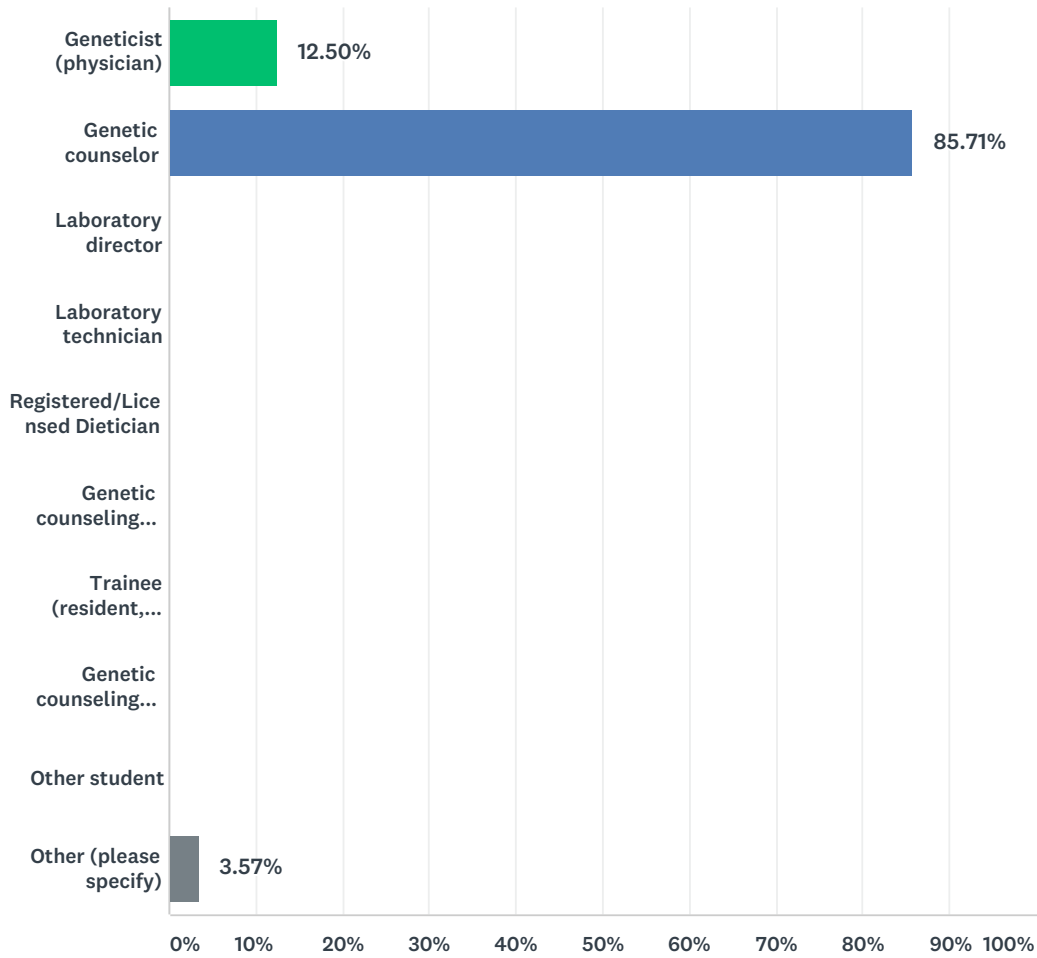


# Q1 How would you describe your primary clinical role?

Answered: 56 Skipped: 0

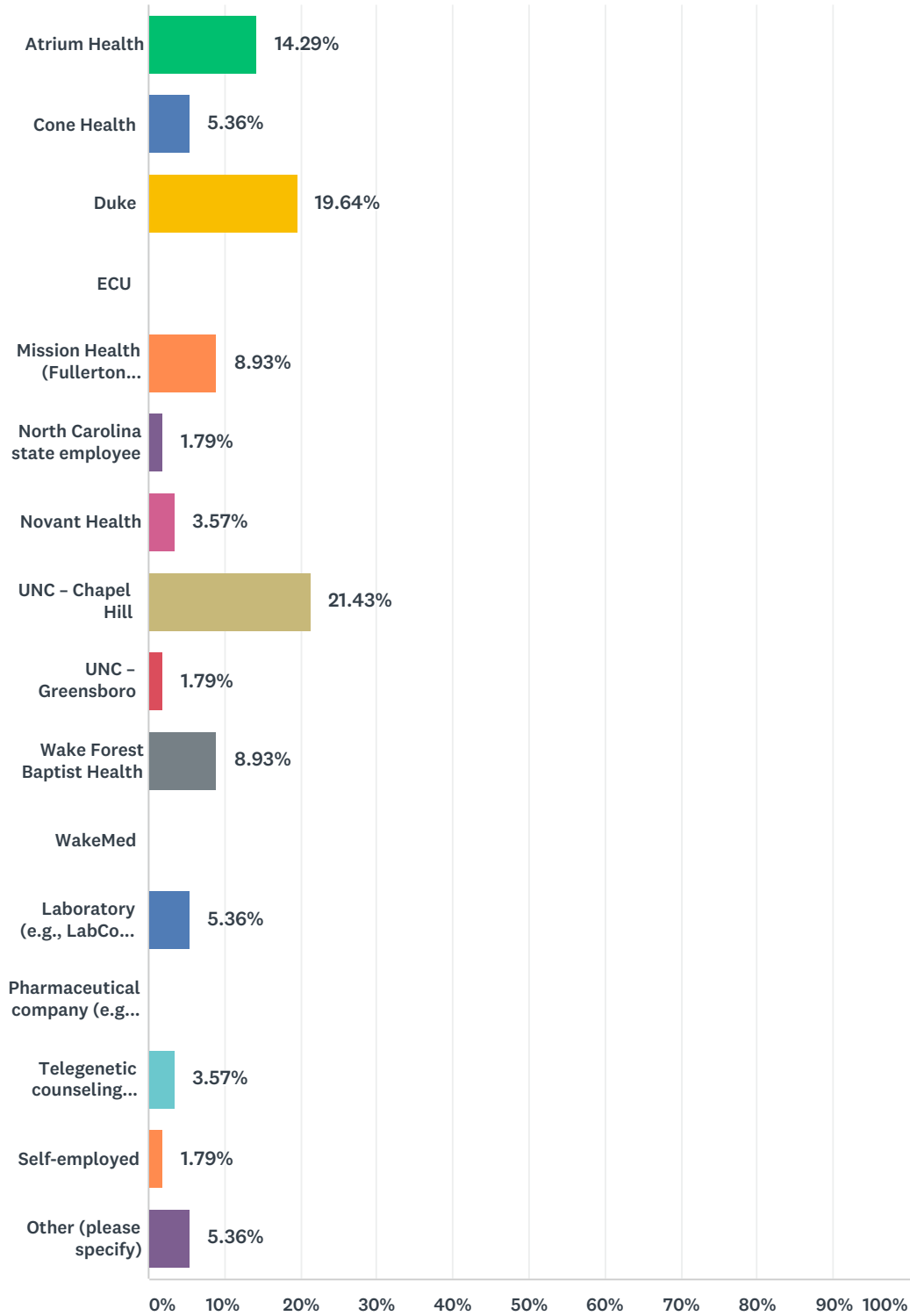


| ANSWER CHOICES                | RESPONSES |    |
|-------------------------------|-----------|----|
| Geneticist (physician)        | 12.50%    | 7  |
| Genetic counselor             | 85.71%    | 48 |
| Laboratory director           | 0.00%     | 0  |
| Laboratory technician         | 0.00%     | 0  |
| Registered/Licensed Dietician | 0.00%     | 0  |
| Genetic counseling assistant  | 0.00%     | 0  |
| Trainee (resident, fellow)    | 0.00%     | 0  |
| Genetic counseling student    | 0.00%     | 0  |
| Other student                 | 0.00%     | 0  |
| Other (please specify)        | 3.57%     | 2  |
| Total Respondents: 56         |           |    |

| # | OTHER (PLEASE SPECIFY) | DATE              |
|---|------------------------|-------------------|
| 1 | Registry Director      | 6/17/2019 8:56 AM |
| 2 | MFM physician          | 6/6/2019 5:05 AM  |

## Q2 Who is your current employer?

Answered: 56 Skipped: 0



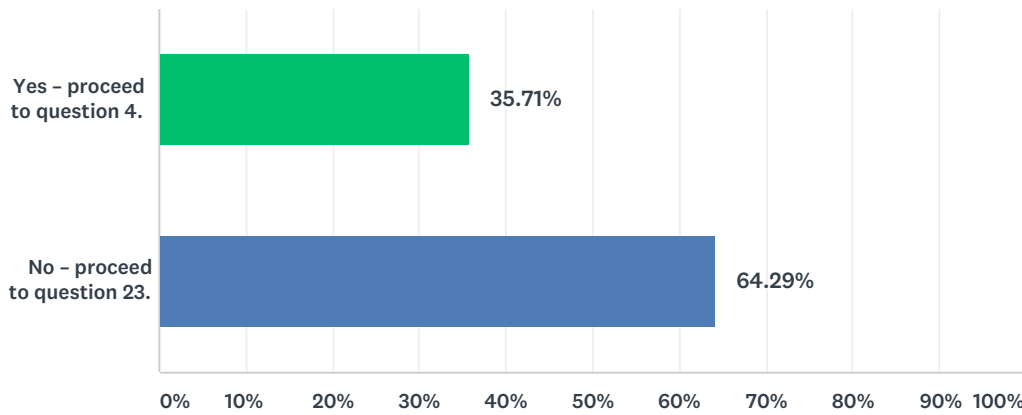
| ANSWER CHOICES | RESPONSES |
|----------------|-----------|
| Atrium Health  | 14.29% 8  |

|  |        |    |
|--|--------|----|
| Cone Health  | 5.36%  | 3  |
| Duke   | 19.64% | 11 |
| ECU  | 0.00%  | 0  |
| Mission Health (Fullerton Genetics Center)                   | 8.93%  | 5  |
| North Carolina state employee                                | 1.79%  | 1  |
| Novant Health  | 3.57%  | 2  |
| UNC – Chapel Hill  | 21.43% | 12 |
| UNC – Greensboro   | 1.79%  | 1  |
| Wake Forest Baptist Health                                   | 8.93%  | 5  |
| WakeMed  | 0.00%  | 0  |
| Laboratory (e.g., LabCorp, etc)                              | 5.36%  | 3  |
| Pharmaceutical company (e.g., Sanofi-Genzyme, Biomarin, etc) | 0.00%  | 0  |
| Telegenetic counseling service (e.g., Genome Medical, etc)   | 3.57%  | 2  |
| Self-employed  | 1.79%  | 1  |
| Other (please specify)                                       | 5.36%  | 3  |
| Total Respondents: 56  |        |    |

| # | OTHER (PLEASE SPECIFY)  | DATE              |
|---|-------------------------|-------------------|
| 1 | Non-profit advocacy org | 6/17/2019 8:56 AM |
| 2 | Mayo Clinic             | 6/17/2019 8:17 AM |
| 3 | Mednax                  | 6/6/2019 5:05 AM  |

### Q3 Do you currently provide telegenetics services through your employer?

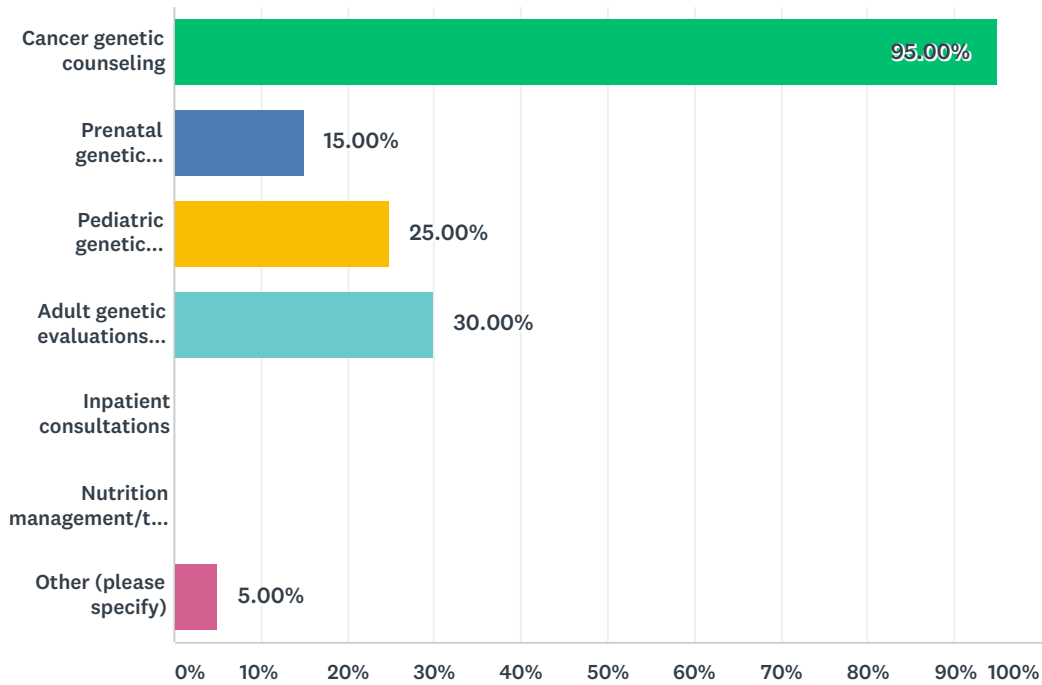
Answered: 56 Skipped: 0



| ANSWER CHOICES               | RESPONSES |    |
|------------------------------|-----------|----|
| Yes – proceed to question 4. | 35.71%    | 20 |
| No – proceed to question 23. | 64.29%    | 36 |
| Total Respondents: 56        |           |    |

### Q4 What type of telegenetics service(s) do you provide? Please choose all that apply.

Answered: 20 Skipped: 36

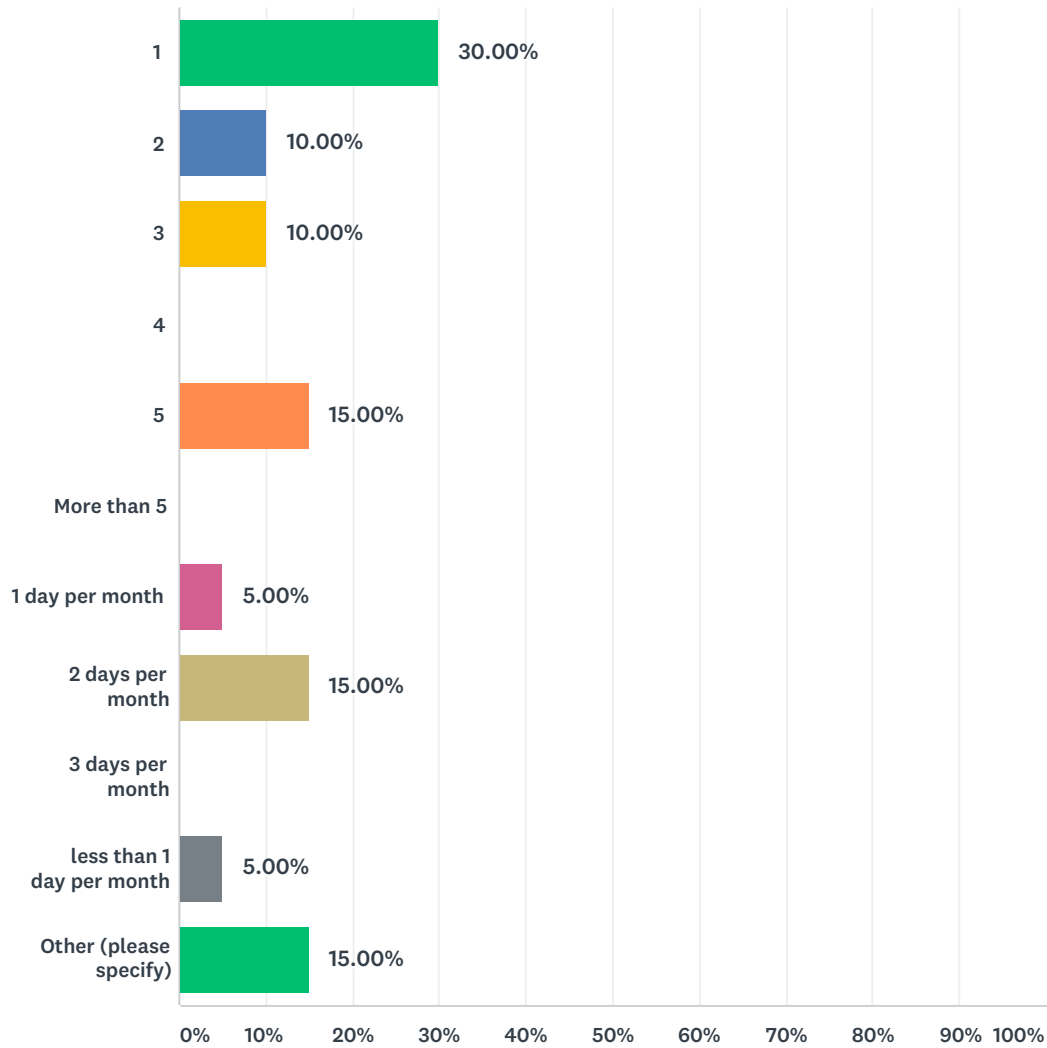


| ANSWER CHOICES                                       | RESPONSES |
|--|-----------|
| Cancer genetic counseling                            | 95.00% 19 |
| Prenatal genetic counseling                          | 15.00% 3  |
| Pediatric genetic evaluations (includes examination) | 25.00% 5  |
| Adult genetic evaluations (includes examination)     | 30.00% 6  |
| Inpatient consultations                              | 0.00% 0   |
| Nutrition management/therapy                         | 0.00% 0   |
| Other (please specify)                               | 5.00% 1   |
| Total Respondents: 20                                |           |

| # | OTHER (PLEASE SPECIFY)                                      | DATE              |
|---|---|-------------------|
| 1 | Cardio Genetics, general adult no eval, proactive screening | 6/9/2019 12:34 PM |

### Q5 How many days per week do you provide this service (average)?

Answered: 20 Skipped: 36



| ANSWER CHOICES            | RESPONSES |   |
|---------------------------|-----------|---|
| 1                         | 30.00%    | 6 |
| 2                         | 10.00%    | 2 |
| 3                         | 10.00%    | 2 |
| 4                         | 0.00%     | 0 |
| 5                         | 15.00%    | 3 |
| More than 5               | 0.00%     | 0 |
| 1 day per month           | 5.00%     | 1 |
| 2 days per month          | 15.00%    | 3 |
| 3 days per month          | 0.00%     | 0 |
| less than 1 day per month | 5.00%     | 1 |

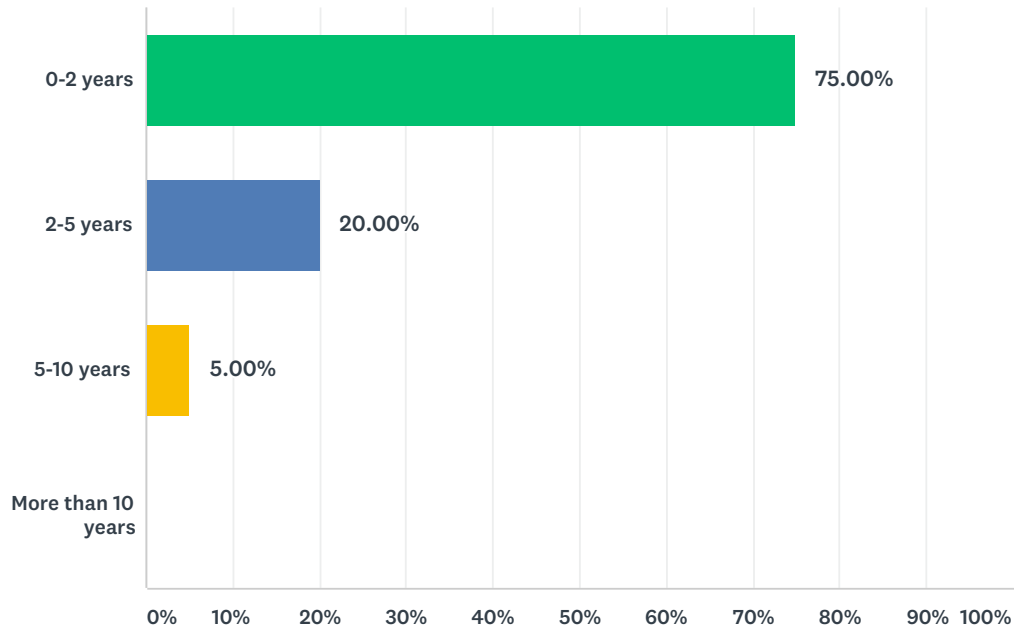
|                        |        |   |
|------------------------|--------|---|
| Other (please specify) | 15.00% | 3 |
| Total Respondents: 20  |        |   |

| # | OTHER (PLEASE SPECIFY)  | DATE              |
|---|---|-------------------|
| 1 | We have one day for scheduled appointments and I add in patients throughout the week if necessary | 7/1/2019 8:30 AM  |
| 2 | no set schedule; scheduled by me as referrals are received  | 6/4/2019 9:42 AM  |
| 3 | I now just cover as needed. I mostly establish new telemed contracts                              | 6/3/2019 12:26 PM |



### Q6 For how long have you been providing the service?

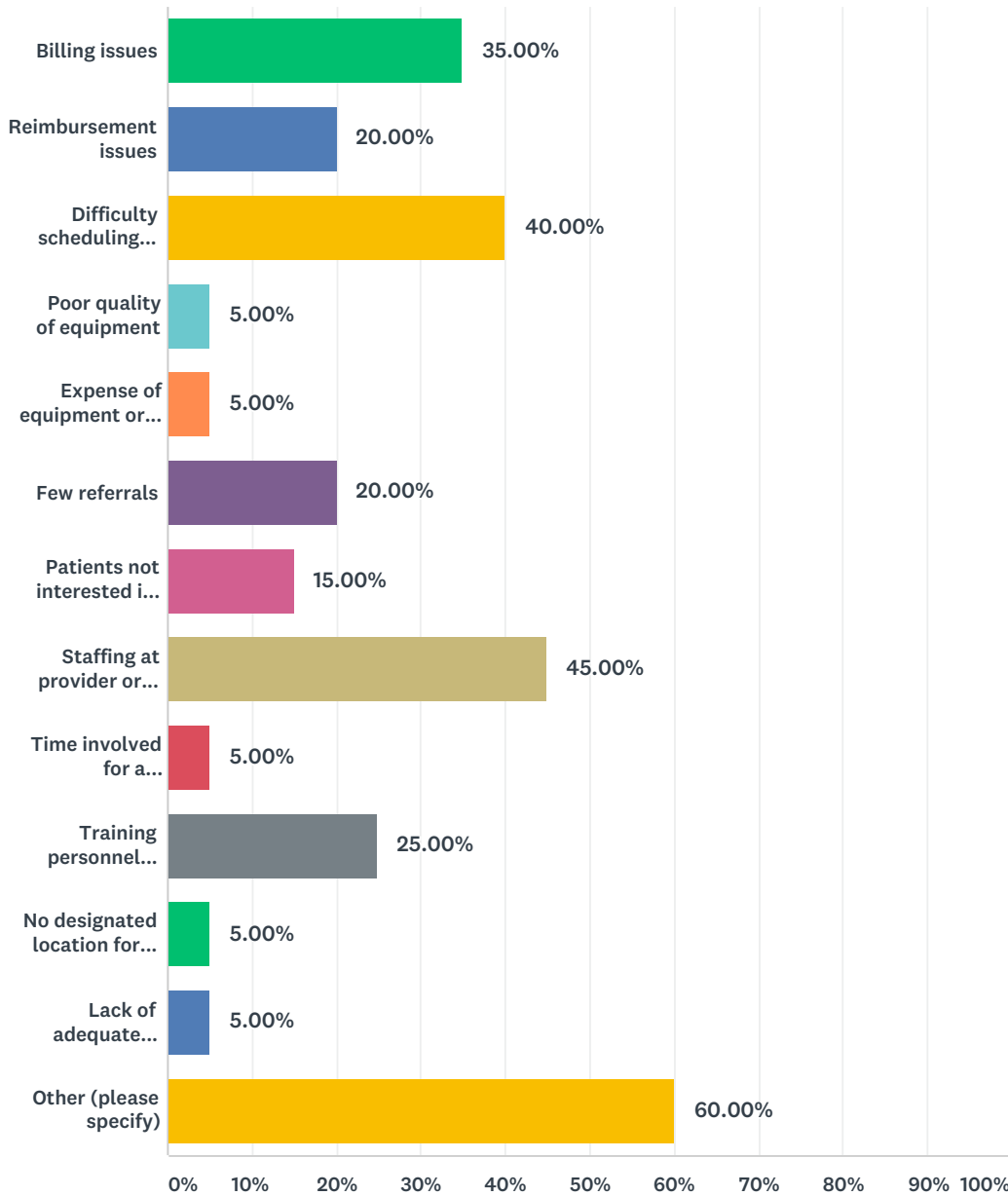
Answered: 20 Skipped: 36



| ANSWER CHOICES        | RESPONSES |
|-----------------------|-----------|
| 0-2 years             | 75.00% 15 |
| 2-5 years             | 20.00% 4  |
| 5-10 years            | 5.00% 1   |
| More than 10 years    | 0.00% 0   |
| Total Respondents: 20 |           |

### Q7 Were there any barriers that you encountered when setting up your telegenetics service? Please choose all that apply.

Answered: 20 Skipped: 36



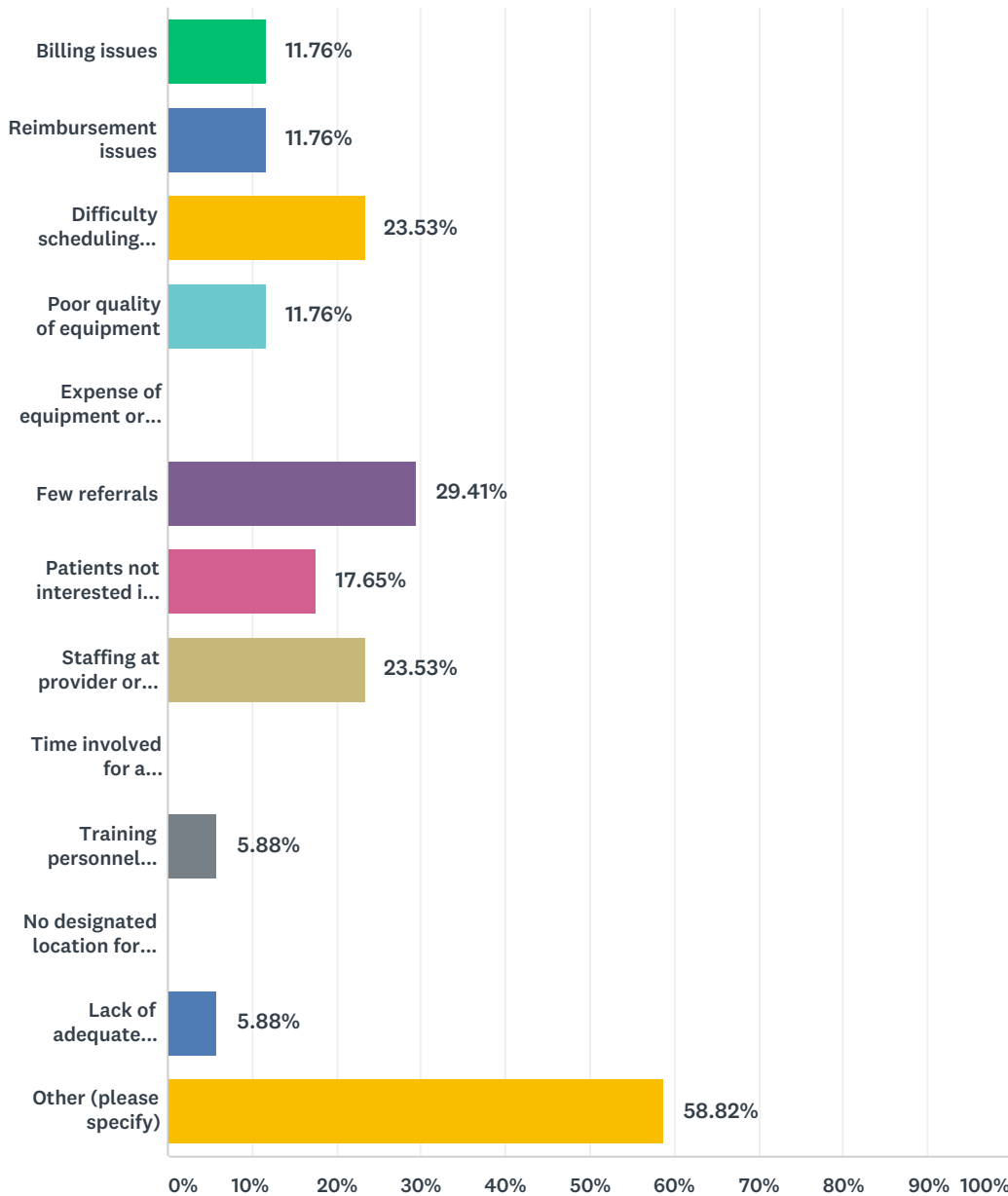
| ANSWER CHOICES                   | RESPONSES |   |
|----------------------------------|-----------|---|
| Billing issues                   | 35.00%    | 7 |
| Reimbursement issues             | 20.00%    | 4 |
| Difficulty scheduling patients   | 40.00%    | 8 |
| Poor quality of equipment        | 5.00%     | 1 |
| Expense of equipment or software | 5.00%     | 1 |

|   |        |    |
|---|--------|----|
| Few referrals   | 20.00% | 4  |
| Patients not interested in this service                       | 15.00% | 3  |
| Staffing at provider or patient sites                         | 45.00% | 9  |
| Time involved for a telegenetics visit vs office/clinic visit | 5.00%  | 1  |
| Training personnel involved                                   | 25.00% | 5  |
| No designated location for the patient                        | 5.00%  | 1  |
| Lack of adequate internet connection                          | 5.00%  | 1  |
| Other (please specify)  | 60.00% | 12 |
| Total Respondents: 20   |        |    |

| #  | OTHER (PLEASE SPECIFY)  | DATE              |
|----|---|-------------------|
| 1  | Currently we are using nurses to help set up patient in room so their time is extremely limited as to when they can take place. the facility aslo goes alot of their own genetic testing through physicians so referral numbers aren't high | 7/1/2019 8:30 AM  |
| 2  | IT issues, and lack of institutional IT help to overcome these issues   | 6/7/2019 11:24 AM |
| 3  | I personally did not encounter these issues although the telegenetics company I work for may have.  | 6/6/2019 5:34 AM  |
| 4  | getting results from tests ordered  | 6/4/2019 10:39 AM |
| 5  | the facility pays me directly; there is no billing to the patient or the patient's insurance  | 6/4/2019 9:42 AM  |
| 6  | I did not set up program so not applicable  | 6/3/2019 2:37 PM  |
| 7  | As GCs we cannot bill for telemed in NC b/c of lack of licensure. We have to set up contracts with clinics who pay for our service. This has been a significant barrier as we are competing for budget monies in small more rural clinics   | 6/3/2019 12:26 PM |
| 8  | difficulty to do thorough clinical exams, especially on uncooperative kids, via telemed   | 6/3/2019 10:51 AM |
| 9  | None, I was not involved in setting up the service  | 6/3/2019 10:31 AM |
| 10 | I was not involved in setting up telegenetic services.  | 6/3/2019 9:57 AM  |
| 11 | Supervising MD, outside EMR   | 6/3/2019 9:53 AM  |
| 12 | already set up when i started working   | 6/3/2019 9:03 AM  |

### Q8 Are there any current issues related to your ability to provide telegenetics services (after overcoming any barriers to setting up the service)? Please choose all that apply.

Answered: 17 Skipped: 39



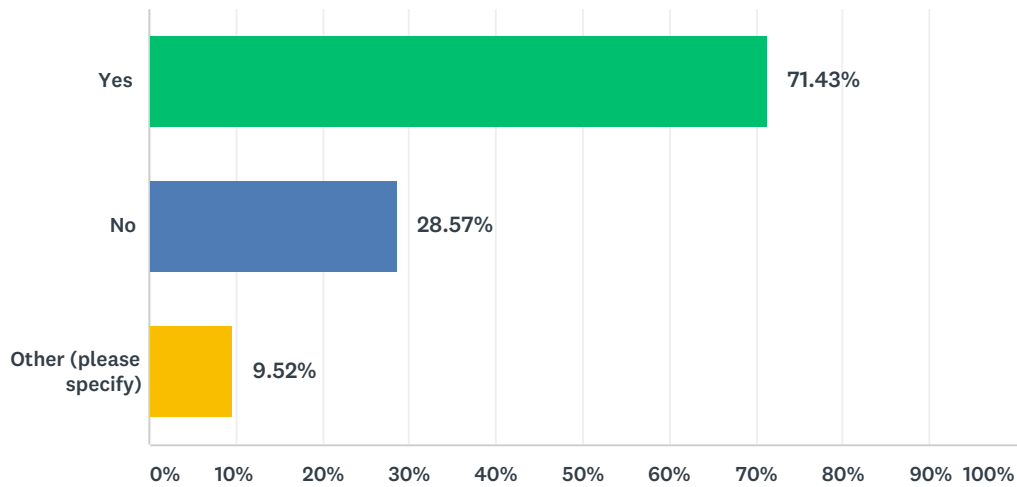
| ANSWER CHOICES                 | RESPONSES |
|--------------------------------|-----------|
| Billing issues                 | 11.76% 2  |
| Reimbursement issues           | 11.76% 2  |
| Difficulty scheduling patients | 23.53% 4  |
| Poor quality of equipment      | 11.76% 2  |

|   |        |    |
|---|--------|----|
| Expense of equipment or software                              | 0.00%  | 0  |
| Few referrals   | 29.41% | 5  |
| Patients not interested in this service                       | 17.65% | 3  |
| Staffing at provider or patient sites                         | 23.53% | 4  |
| Time involved for a telegenetics visit vs office/clinic visit | 0.00%  | 0  |
| Training personnel involved                                   | 5.88%  | 1  |
| No designated location for the patient                        | 0.00%  | 0  |
| Lack of adequate internet connection                          | 5.88%  | 1  |
| Other (please specify)  | 58.82% | 10 |
| Total Respondents: 17   |        |    |

| #  | OTHER (PLEASE SPECIFY)   | DATE              |
|----|--|-------------------|
| 1  | General technology issues  | 7/1/2019 8:30 AM  |
| 2  | IT issues and lack of IT help  | 6/7/2019 11:24 AM |
| 3  | f/u on lab results is time-consuming as labs are often performed through laboratories that are not affiliated with our institution or get imported into Epic           | 6/4/2019 10:39 AM |
| 4  | None   | 6/3/2019 2:37 PM  |
| 5  | we currently provide this at just one site therefore our scheduling staff do not always recognize individuals who live close to this site and would be good candidates | 6/3/2019 2:04 PM  |
| 6  | continued concern with budgeting to establish the service contracts  | 6/3/2019 12:26 PM |
| 7  | as above, quality comparable (to in person) physical exam is challenging   | 6/3/2019 10:51 AM |
| 8  | Technical issues   | 6/3/2019 10:31 AM |
| 9  | NA currently no issues   | 6/3/2019 9:57 AM  |
| 10 | Long wait time (not enough slots available for clinic volume)  | 6/3/2019 9:53 AM  |

### Q9 Do you have dedicated staffing (schedulers, administrative staff, etc) for providing this service?

Answered: 21 Skipped: 35

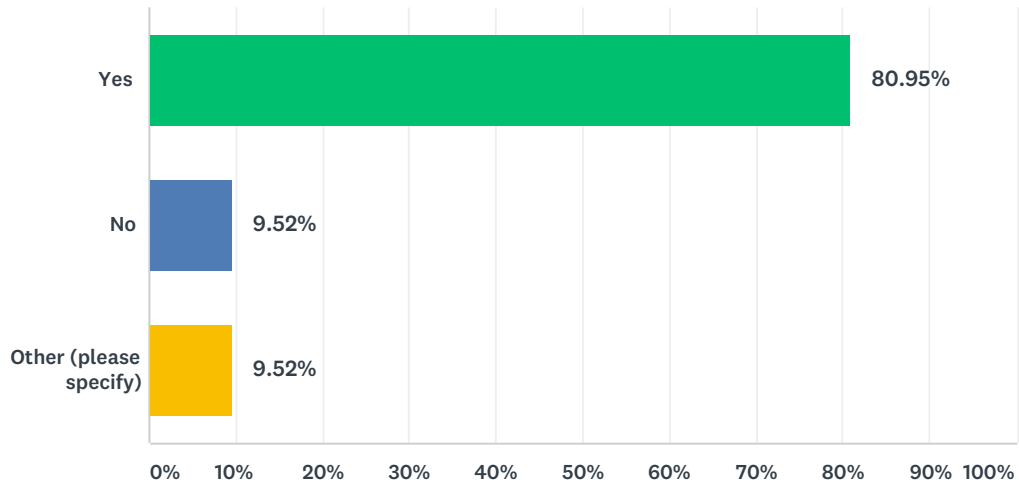


| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Yes                    | 71.43% 15 |
| No                     | 28.57% 6  |
| Other (please specify) | 9.52% 2   |
| Total Respondents: 21  |           |

| # | OTHER (PLEASE SPECIFY)  | DATE             |
|---|---|------------------|
| 1 | We have staff that set up these appointment but it wasn't that we hired new people to fill a role, this responsibility was placed on people already existing                                    | 7/1/2019 8:30 AM |
| 2 | The same administrative staff that supports in-person appointments schedules telemedicine. We train staff at regional sites to aid in scheduling and facilitating appointments and blood draws. | 6/3/2019 9:57 AM |

### Q10 Do you receive institutional support for providing this service?

Answered: 21 Skipped: 35

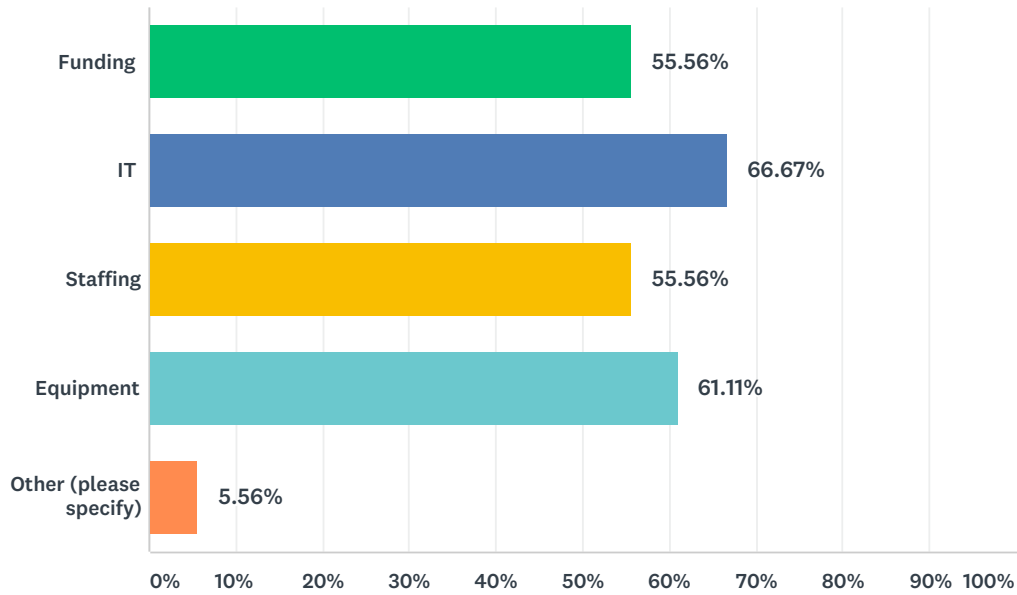


| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Yes                    | 80.95% 17 |
| No                     | 9.52% 2   |
| Other (please specify) | 9.52% 2   |
| Total Respondents: 21  |           |

| # | OTHER (PLEASE SPECIFY)                           | DATE             |
|---|--|------------------|
| 1 | not applicable; I'm self-employed                | 6/4/2019 9:42 AM |
| 2 | Not involved in this part of telemedicine clinic | 6/3/2019 9:57 AM |

### Q11 If yes to question 10, what types of support do you receive?

Answered: 18 Skipped: 38



| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Funding                | 55.56% 10 |
| IT                     | 66.67% 12 |
| Staffing               | 55.56% 10 |
| Equipment              | 61.11% 11 |
| Other (please specify) | 5.56% 1   |
| Total Respondents: 18  |           |

| # | OTHER (PLEASE SPECIFY)               | DATE             |
|---|--------------------------------------|------------------|
| 1 | Not involved in this part of clinic. | 6/3/2019 9:57 AM |



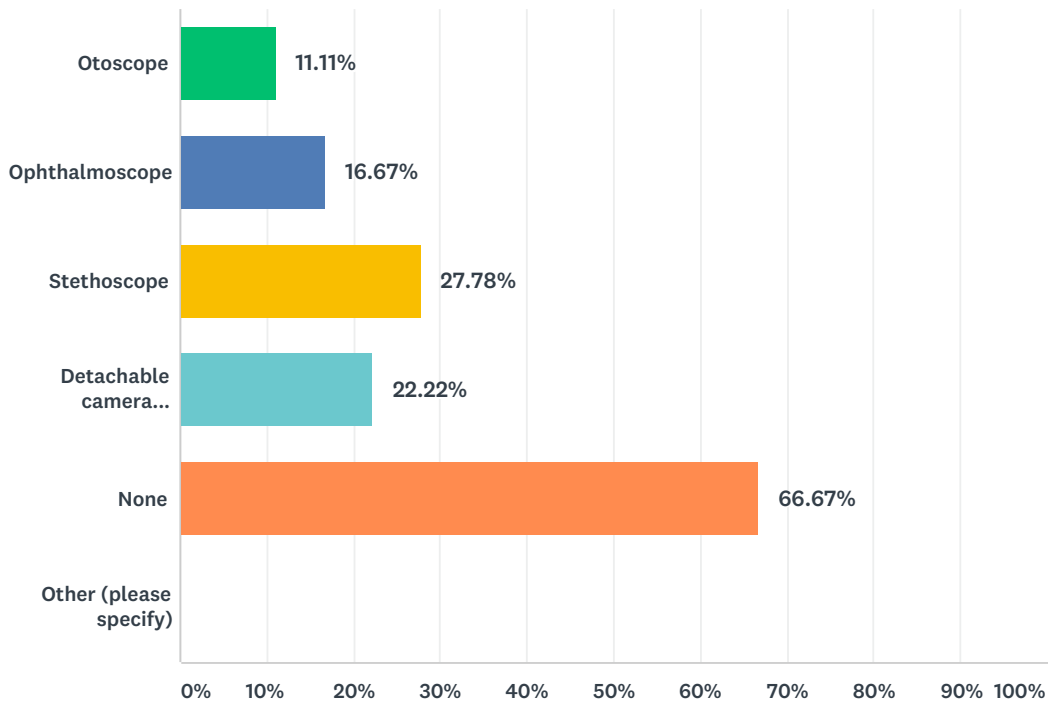
## Q12 What software program do you currently use for telegenetics?

Answered: 21 Skipped: 35

| #  | RESPONSES  | DATE               |
|----|--|--------------------|
| 1  | na   | 7/14/2019 4:31 AM  |
| 2  | In Touch   | 7/14/2019 4:01 AM  |
| 3  | WebEx  | 7/1/2019 8:30 AM   |
| 4  | InTouch  | 6/17/2019 10:15 AM |
| 5  | Zoom for video, VSee Telemed platform, home grown software program                                 | 6/9/2019 12:34 PM  |
| 6  | Zoom, through Epic   | 6/7/2019 11:24 AM  |
| 7  | Platform specific to my company.   | 6/6/2019 5:34 AM   |
| 8  | do not know  | 6/4/2019 10:39 AM  |
| 9  | InTouch  | 6/4/2019 10:32 AM  |
| 10 | None. I use the phone. I enter a clinic note in the EMR of the facility where the patient is seen. | 6/4/2019 9:42 AM   |
| 11 | Quick pedigree, database developed by my employer. Avaya phone service                             | 6/3/2019 2:37 PM   |
| 12 | I don't recall   | 6/3/2019 2:04 PM   |
| 13 | WebEx via a secure PHI level connection  | 6/3/2019 12:26 PM  |
| 14 | WebEx  | 6/3/2019 12:11 PM  |
| 15 | In touch   | 6/3/2019 10:51 AM  |
| 16 | Webex  | 6/3/2019 10:31 AM  |
| 17 | Vidyo  | 6/3/2019 9:57 AM   |
| 18 | Vidyo  | 6/3/2019 9:57 AM   |
| 19 | VIDYO  | 6/3/2019 9:57 AM   |
| 20 | Vidyo  | 6/3/2019 9:53 AM   |
| 21 | WebEx  | 6/3/2019 9:03 AM   |

### Q13 What type of peripheral devices are used during your telegenetics evaluation? Please choose all that apply.

Answered: 18 Skipped: 38

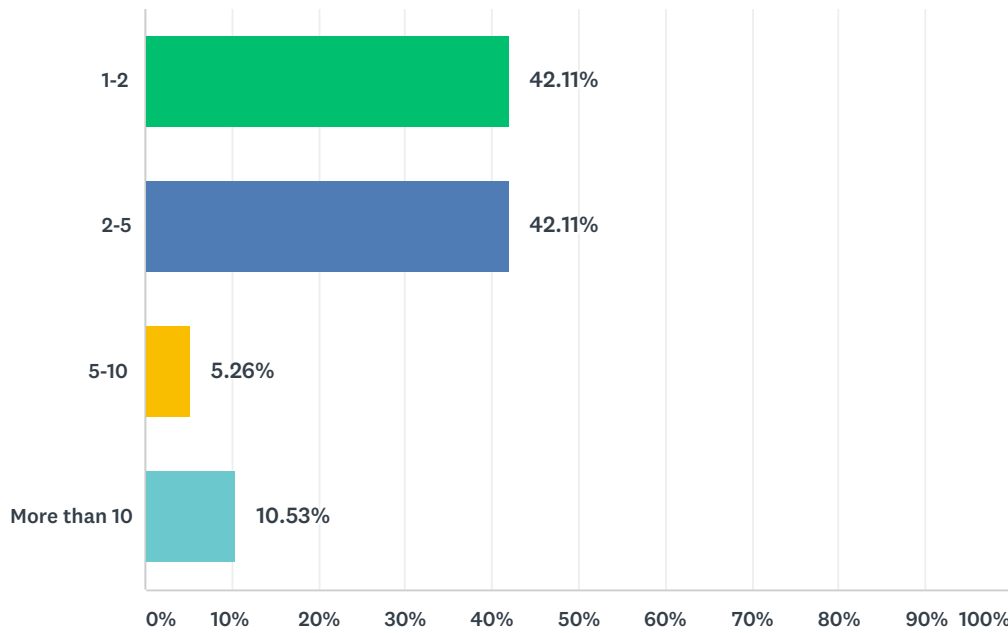


| ANSWER CHOICES   | RESPONSES |    |
|--|-----------|----|
| Otoscope   | 11.11%    | 2  |
| Ophthalmoscope   | 16.67%    | 3  |
| Stethoscope  | 27.78%    | 5  |
| Detachable camera with/without ability to take photographs or videos | 22.22%    | 4  |
| None   | 66.67%    | 12 |
| Other (please specify)   | 0.00%     | 0  |
| Total Respondents: 18  |           |    |

| # | OTHER (PLEASE SPECIFY)  | DATE |
|---|-------------------------|------|
|   | There are no responses. |      |

### Q14 How many other providers are also doing telegenetics at your current place of employment?

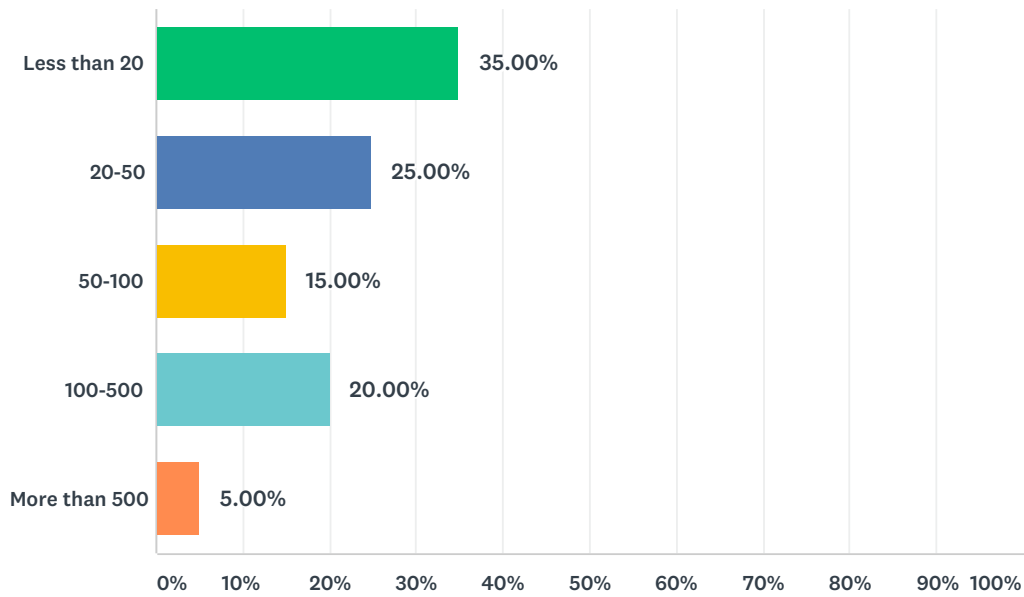
Answered: 19 Skipped: 37



| ANSWER CHOICES        | RESPONSES |   |
|-----------------------|-----------|---|
| 1-2                   | 42.11%    | 8 |
| 2-5                   | 42.11%    | 8 |
| 5-10                  | 5.26%     | 1 |
| More than 10          | 10.53%    | 2 |
| Total Respondents: 19 |           |   |

### Q15 Approximately how many patients have you personally seen in the last year via telegenetics (June 2018-May 2019)?

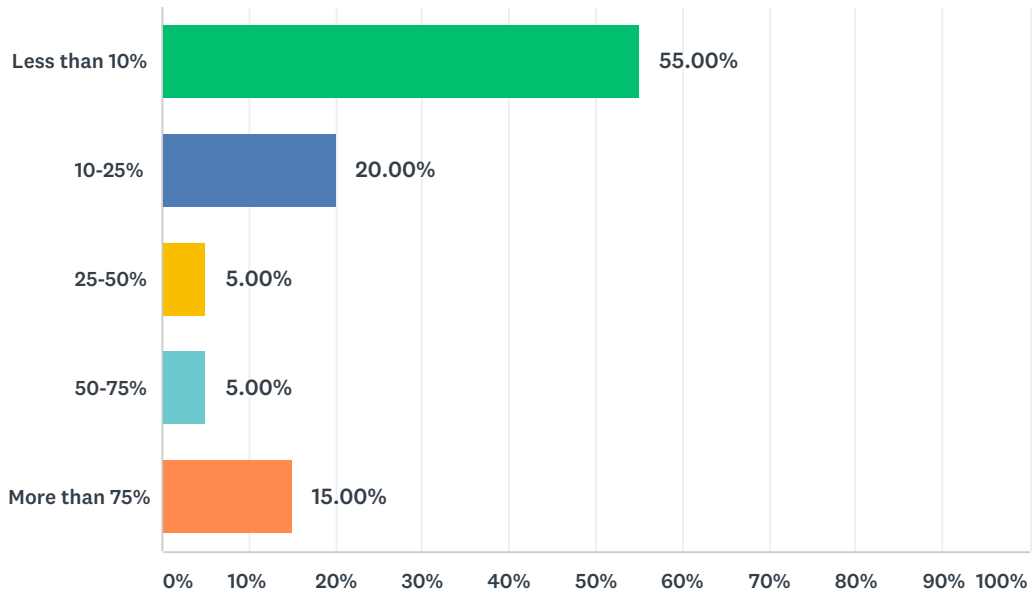
Answered: 20 Skipped: 36



| ANSWER CHOICES        | RESPONSES |   |
|-----------------------|-----------|---|
| Less than 20          | 35.00%    | 7 |
| 20-50                 | 25.00%    | 5 |
| 50-100                | 15.00%    | 3 |
| 100-500               | 20.00%    | 4 |
| More than 500         | 5.00%     | 1 |
| Total Respondents: 20 |           |   |

### Q16 Approximately what percentage of your clinical practice involves telegenetics?

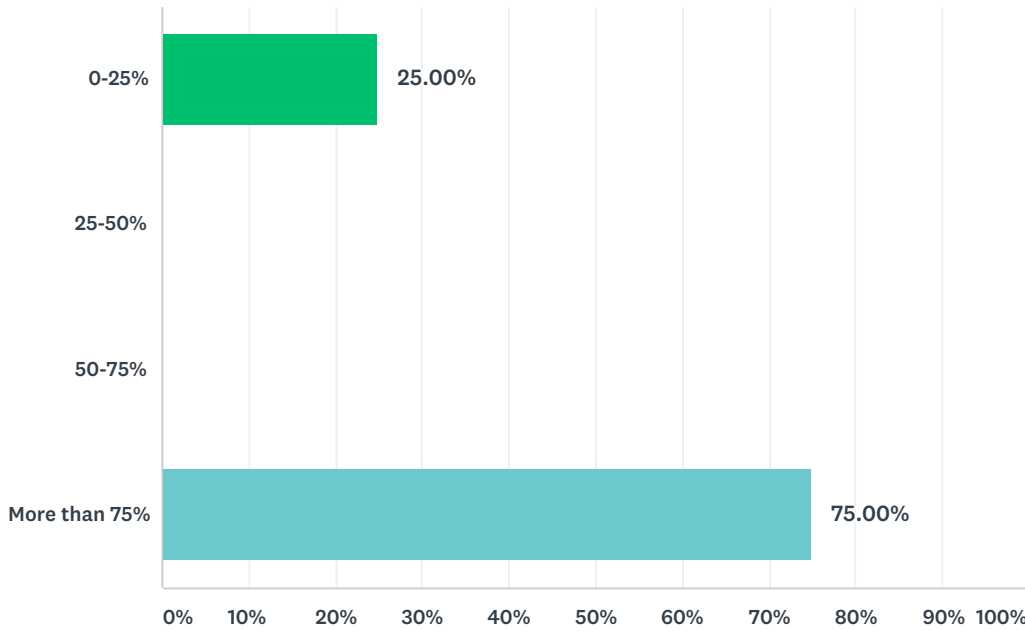
Answered: 20 Skipped: 36



| ANSWER CHOICES        | RESPONSES |    |
|-----------------------|-----------|----|
| Less than 10%         | 55.00%    | 11 |
| 10-25%                | 20.00%    | 4  |
| 25-50%                | 5.00%     | 1  |
| 50-75%                | 5.00%     | 1  |
| More than 75%         | 15.00%    | 3  |
| Total Respondents: 20 |           |    |

### Q17 Approximately what percentage of your telegenetics patients are North Carolina residents?

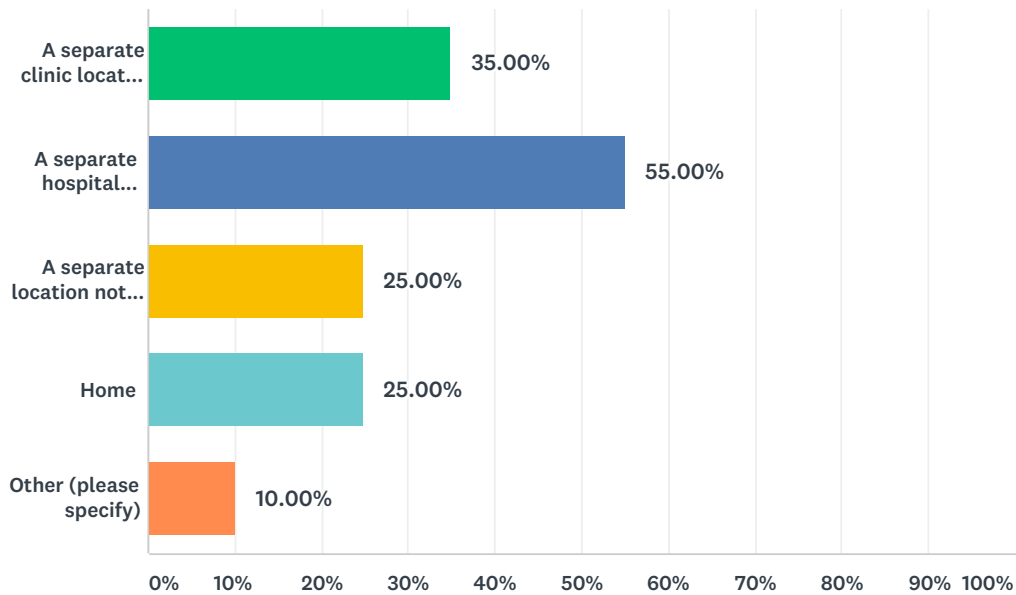
Answered: 20 Skipped: 36



| ANSWER CHOICES        | RESPONSES |    |
|-----------------------|-----------|----|
| 0-25%                 | 25.00%    | 5  |
| 25-50%                | 0.00%     | 0  |
| 50-75%                | 0.00%     | 0  |
| More than 75%         | 75.00%    | 15 |
| Total Respondents: 20 |           |    |

### Q18 Where is the patient typically located when the service is being provided? Please choose all that apply.

Answered: 20 Skipped: 36

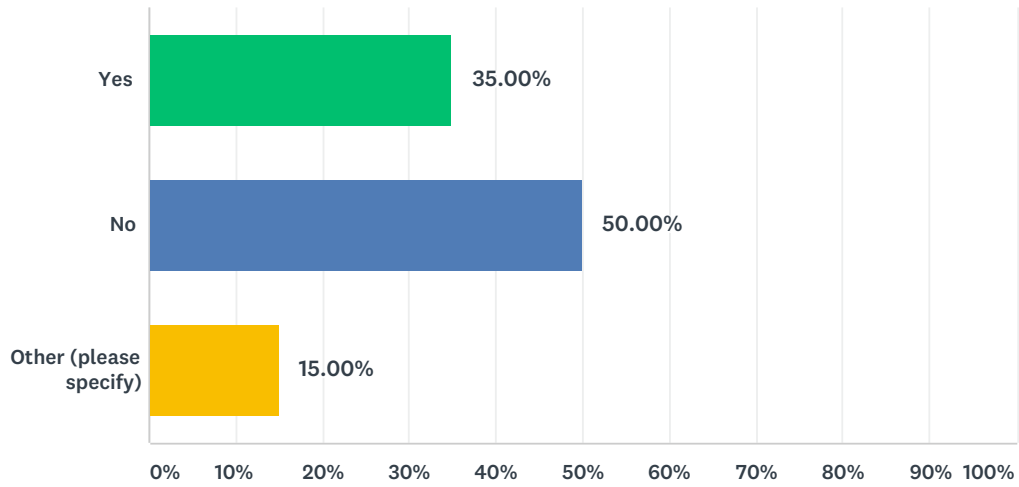


| ANSWER CHOICES   | RESPONSES |    |
|--|-----------|----|
| A separate clinic location affiliated with your center/institution/department                                    | 35.00%    | 7  |
| A separate hospital location affiliated with your center/institution/department                                  | 55.00%    | 11 |
| A separate location not affiliated with your center/institution/department (does not include the patient's home) | 25.00%    | 5  |
| Home   | 25.00%    | 5  |
| Other (please specify)   | 10.00%    | 2  |
| Total Respondents: 20  |           |    |

| # | OTHER (PLEASE SPECIFY)      | DATE              |
|---|-----------------------------|-------------------|
| 1 | Their workplace,            | 6/9/2019 12:34 PM |
| 2 | or anywhere they want to be | 6/4/2019 9:42 AM  |

### Q19 Do you bill for your service?

Answered: 20 Skipped: 36



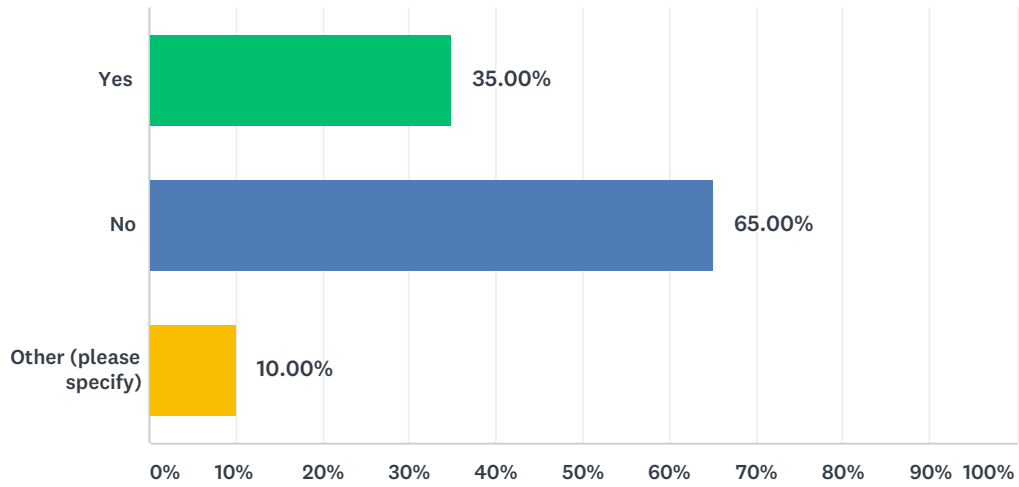
| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Yes                    | 35.00% 7  |
| No                     | 50.00% 10 |
| Other (please specify) | 15.00% 3  |
| Total Respondents: 20  |           |

| # | OTHER (PLEASE SPECIFY)  | DATE              |
|---|---|-------------------|
| 1 | the facility contracts with me for these services and pays me per patient | 6/4/2019 9:42 AM  |
| 2 | It is based on service contract. We cannot bill the patient               | 6/3/2019 12:26 PM |
| 3 | Contract with the hospital affiliated - do not bill the patient           | 6/3/2019 12:11 PM |



## Q20 Are you aware if you receive a reimbursement for this service?

Answered: 20 Skipped: 36

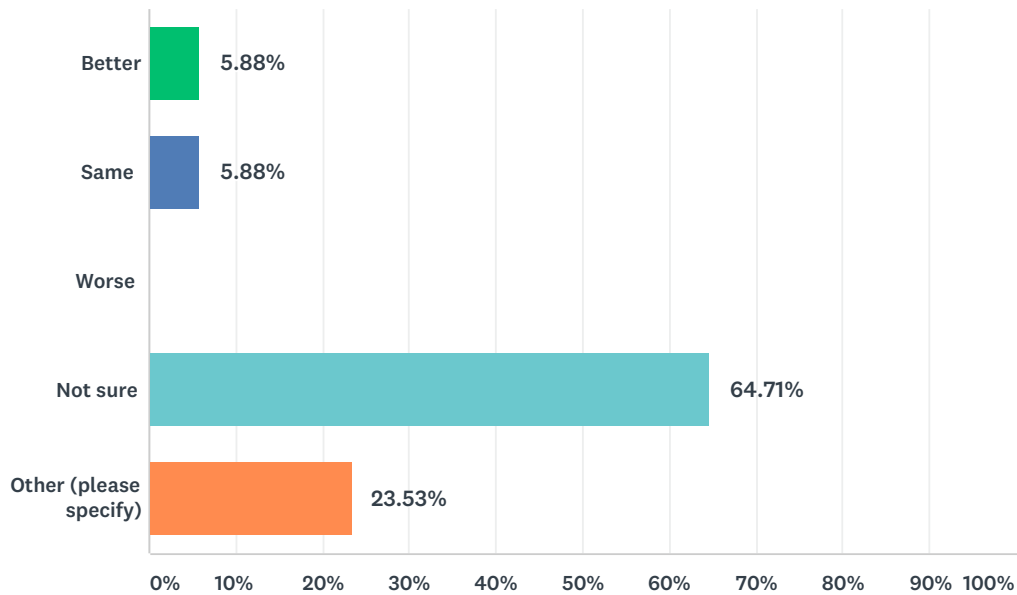


| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Yes                    | 35.00% 7  |
| No                     | 65.00% 13 |
| Other (please specify) | 10.00% 2  |
| Total Respondents: 20  |           |

| # | OTHER (PLEASE SPECIFY)                      | DATE              |
|---|---|-------------------|
| 1 | I assume we do but have not checked into it | 7/14/2019 4:01 AM |
| 2 | Yes, I am aware. There is no reimbursement  | 6/4/2019 9:42 AM  |

### Q21 If yes to question 20, how does your reimbursement compare to an in-person clinic/office visit?

Answered: 17 Skipped: 39

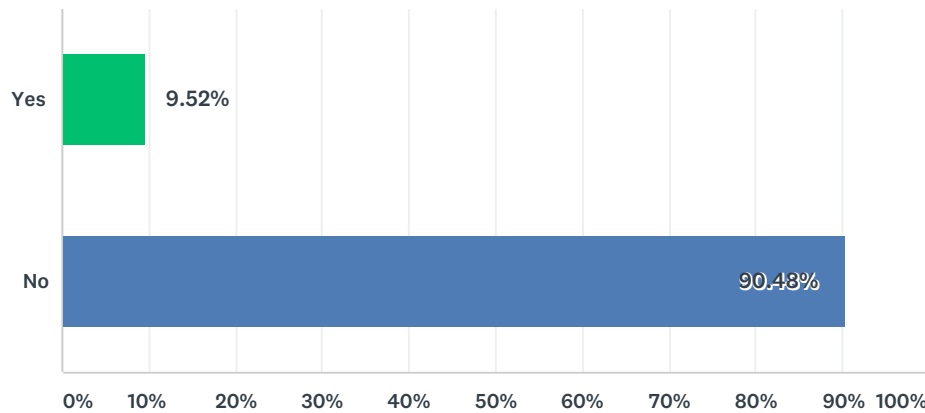


| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Better                 | 5.88% 1   |
| Same                   | 5.88% 1   |
| Worse                  | 0.00% 0   |
| Not sure               | 64.71% 11 |
| Other (please specify) | 23.53% 4  |
| Total Respondents: 17  |           |

| # | OTHER (PLEASE SPECIFY)   | DATE             |
|---|--|------------------|
| 1 | We currently do not bill for in office visits or telegenetics - Unaware if reimbursement has been completed for telegenetic visits | 7/1/2019 8:30 AM |
| 2 | No reimbursement   | 6/4/2019 9:42 AM |
| 3 | Not applicable   | 6/3/2019 2:37 PM |
| 4 | NA   | 6/3/2019 9:57 AM |

### Q22 Do you provide telegenetics services outside of your main employer (e.g., through an online telegenetic counseling service, etc)?

Answered: 21 Skipped: 35

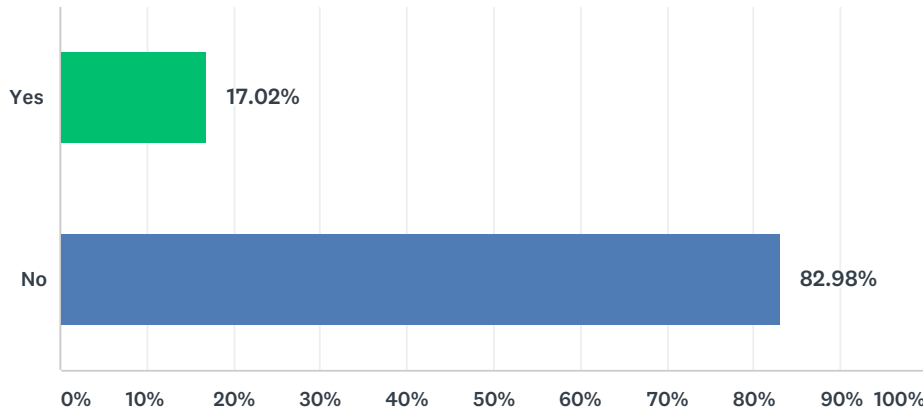


| ANSWER CHOICES        | RESPONSES |
|-----------------------|-----------|
| Yes                   | 9.52% 2   |
| No                    | 90.48% 19 |
| Total Respondents: 21 |           |

| # | PLEASE SPECIFY THE COMPANY                | DATE              |
|---|---|-------------------|
| 1 | GeneMatters (just phone based, not video) | 6/3/2019 10:51 AM |

### Q23 If you answered no to question 3, do you have any plans to begin a telegenetics service?

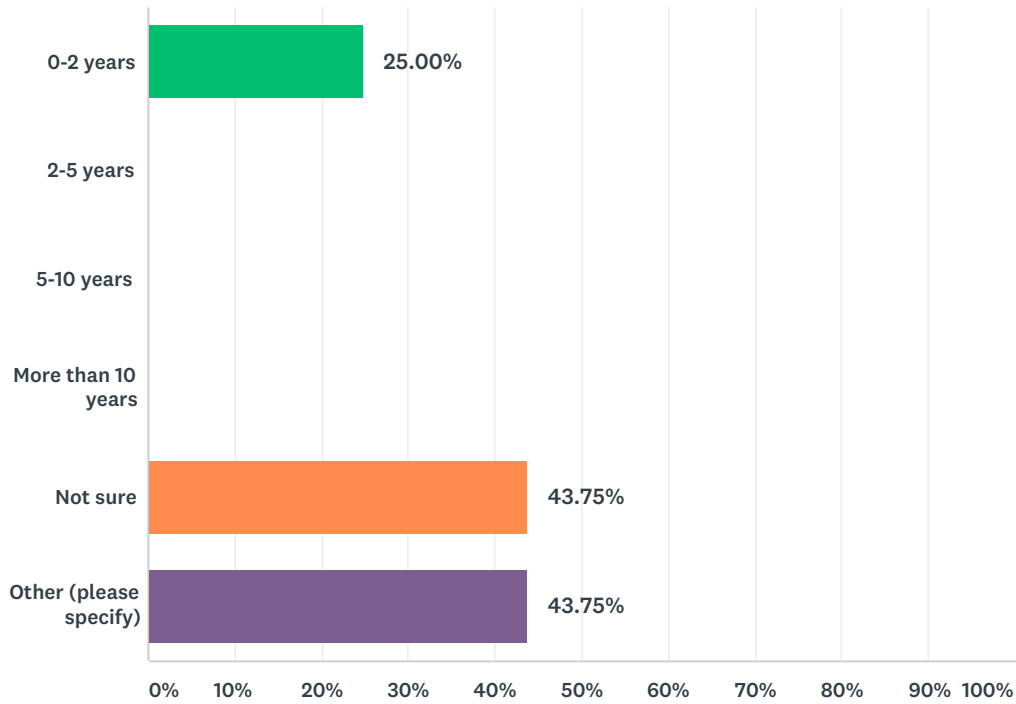
Answered: 47 Skipped: 9



| ANSWER CHOICES        | RESPONSES |    |
|-----------------------|-----------|----|
| Yes                   | 17.02%    | 8  |
| No                    | 82.98%    | 39 |
| Total Respondents: 47 |           |    |

## Q24 If yes to question 23, when do you plan to start this service?

Answered: 16 Skipped: 40

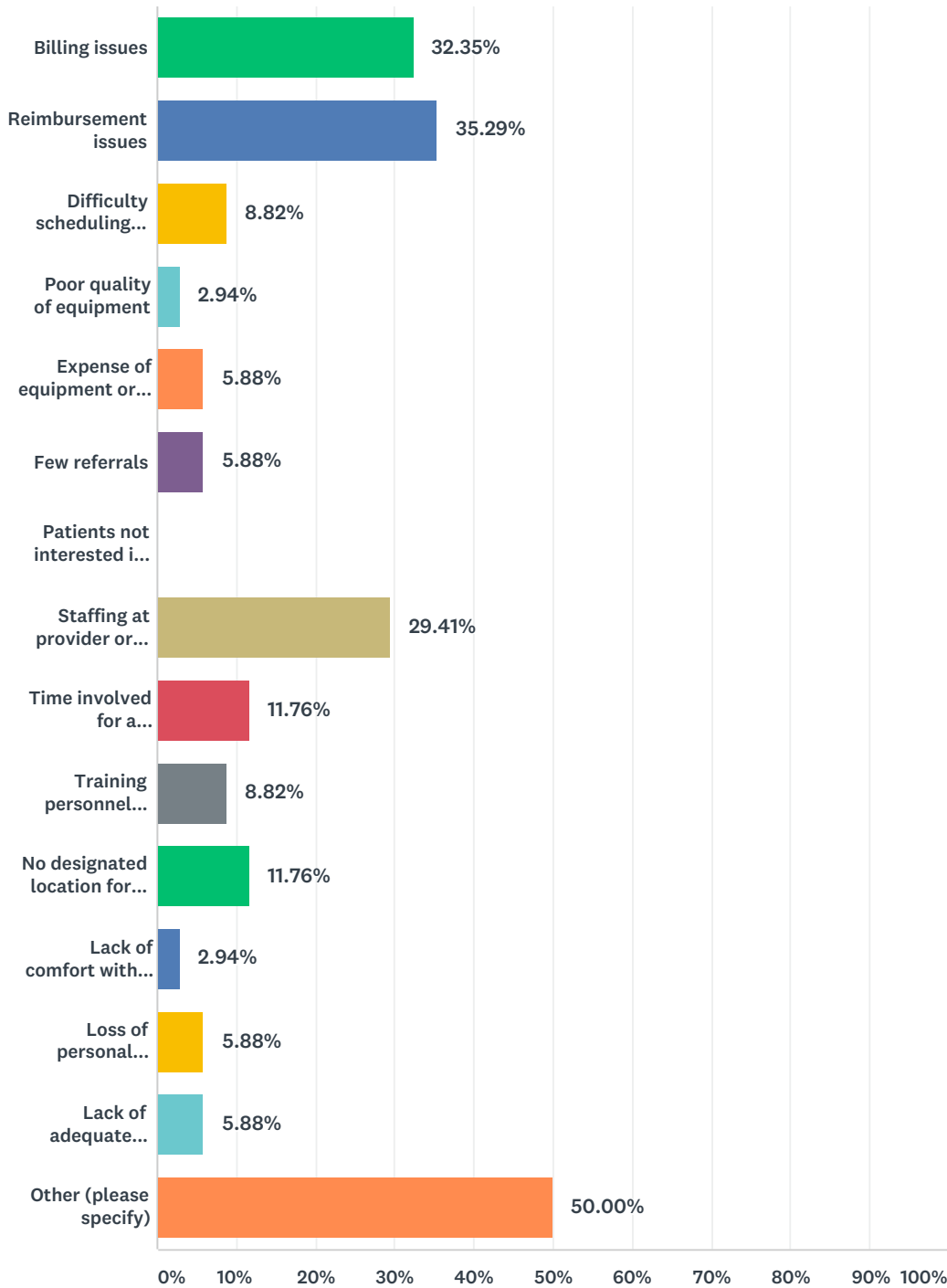


| ANSWER CHOICES         | RESPONSES |   |
|------------------------|-----------|---|
| 0-2 years              | 25.00%    | 4 |
| 2-5 years              | 0.00%     | 0 |
| 5-10 years             | 0.00%     | 0 |
| More than 10 years     | 0.00%     | 0 |
| Not sure               | 43.75%    | 7 |
| Other (please specify) | 43.75%    | 7 |
| Total Respondents: 16  |           |   |

| # | OTHER (PLEASE SPECIFY)  | DATE              |
|---|---|-------------------|
| 1 | na  | 7/14/2019 4:31 AM |
| 2 | Currently being implemented for follow up appointments for GCs (starting in the next few weeks) | 6/17/2019 8:17 AM |
| 3 | Already performing service  | 6/9/2019 12:34 PM |
| 4 | Not planning to   | 6/6/2019 5:34 AM  |
| 5 | NA  | 6/3/2019 9:57 AM  |
| 6 | in the process of trying to get approval with institution                                       | 6/3/2019 9:51 AM  |
| 7 | August 1, 2019  | 6/3/2019 9:21 AM  |

### Q25 If no to question 23, why do you not plan to start this service? Please choose all that apply.

Answered: 34 Skipped: 22



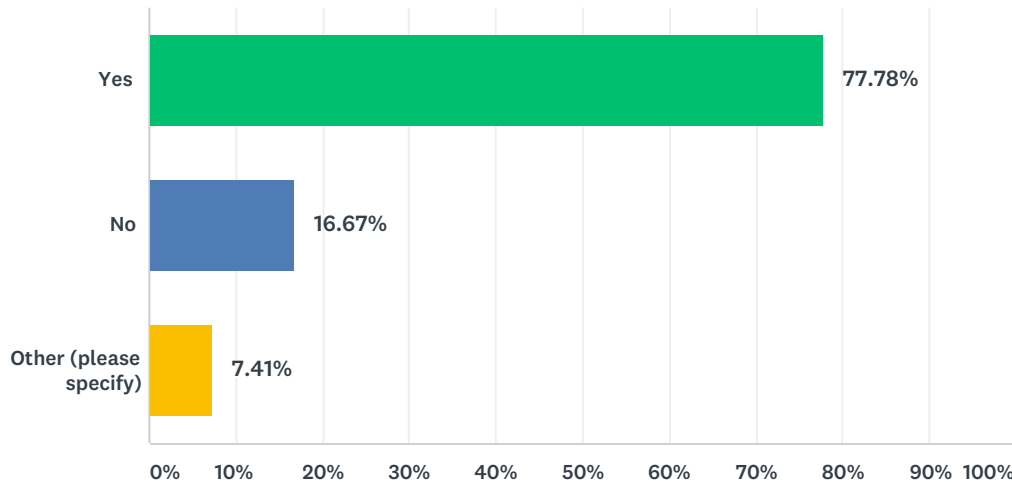
| ANSWER CHOICES       | RESPONSES |    |
|----------------------|-----------|----|
| Billing issues       | 32.35%    | 11 |
| Reimbursement issues | 35.29%    | 12 |

|   |        |    |
|---|--------|----|
| Difficulty scheduling patients                                | 8.82%  | 3  |
| Poor quality of equipment                                     | 2.94%  | 1  |
| Expense of equipment or software                              | 5.88%  | 2  |
| Few referrals   | 5.88%  | 2  |
| Patients not interested in this service                       | 0.00%  | 0  |
| Staffing at provider or patient sites                         | 29.41% | 10 |
| Time involved for a telegenetics visit vs office/clinic visit | 11.76% | 4  |
| Training personnel involved                                   | 8.82%  | 3  |
| No designated location for the patient                        | 11.76% | 4  |
| Lack of comfort with the technology                           | 2.94%  | 1  |
| Loss of personal interaction with the patient                 | 5.88%  | 2  |
| Lack of adequate internet connection                          | 5.88%  | 2  |
| Other (please specify)  | 50.00% | 17 |
| Total Respondents: 34   |        |    |

| #  | OTHER (PLEASE SPECIFY)   | DATE              |
|----|--|-------------------|
| 1  | I feel most comfortable continuing telegenetics through my employer  | 7/1/2019 8:30 AM  |
| 2  | All of the above   | 6/18/2019 6:28 AM |
| 3  | Currently provide informal GC and support via phone and email, but no plans to add formal videoconferencing since we are a non-profit advocacy org and not a hospital or clinic. | 6/17/2019 8:56 AM |
| 4  | I would be willing to consider, but no plans for our clinic to offer this service at this time.  | 6/6/2019 6:12 AM  |
| 5  | Not planning to  | 6/6/2019 5:34 AM  |
| 6  | I have too many patients already   | 6/4/2019 9:42 AM  |
| 7  | Other staff members are already providing the service here   | 6/4/2019 6:00 AM  |
| 8  | I don't think we've really investigated this option yet  | 6/3/2019 2:04 PM  |
| 9  | Approval from department/school of medicine, etc   | 6/3/2019 1:15 PM  |
| 10 | Not being pursued by our medical center  | 6/3/2019 12:29 PM |
| 11 | physical exam needed for clinical diagnosis  | 6/3/2019 11:52 AM |
| 12 | This option has not been fully explored by our site at this time.  | 6/3/2019 10:33 AM |
| 13 | No time or interest to begin a telemed service outside of my employer  | 6/3/2019 9:57 AM  |
| 14 | Do not see patients  | 6/3/2019 9:57 AM  |
| 15 | At this time the Admin does not seem pressed to support the service via this technology  | 6/3/2019 9:57 AM  |
| 16 | Not interested in a second job   | 6/3/2019 9:53 AM  |
| 17 | My GC role is not client-facing as I work for a commercial laboratory.   | 6/3/2019 9:30 AM  |

### Q26 Please answer questions 26-30. Do you feel that there should be training for telegenetics in a genetics residency/fellowship or genetic counseling program?

Answered: 54 Skipped: 2



| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Yes                    | 77.78% 42 |
| No                     | 16.67% 9  |
| Other (please specify) | 7.41% 4   |
| Total Respondents: 54  |           |

| # | OTHER (PLEASE SPECIFY)  | DATE              |
|---|---|-------------------|
| 1 | Not unless, locations of patients requires long distance care. I am not convinced about how effective amd efficient this approach is  | 6/18/2019 6:28 AM |
| 2 | See below   | 6/6/2019 5:34 AM  |
| 3 | Honestly, I think exposure is a good idea in training programs, but intenstive training for genetic counseling only appointments would not be required. A consultation in a telegenetics setting is very similar to a consultation in a in-person genetic counseling setting. | 6/3/2019 9:57 AM  |
| 4 | Brief exposure could be helpful   | 6/3/2019 9:02 AM  |



## Q27 If you answered yes to question 26, what training do you think is necessary (online, on-site, length of time, etc)? Do you feel that this would increase the use of telegenetics in your clinical practice?

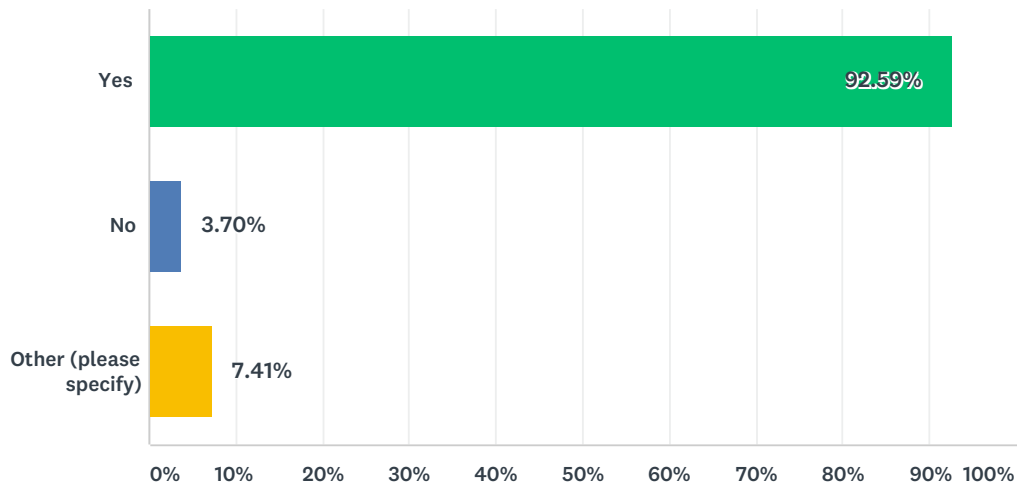
Answered: 39 Skipped: 17

| #  | RESPONSES   | DATE              |
|----|---|-------------------|
| 1  | I think first of all that training programs need to include Core Competencies in Genetics AND telegenetics  | 7/14/2019 4:36 AM |
| 2  | online  | 7/14/2019 4:31 AM |
| 3  | online and on-site training, suspect it would make people more comfortable with doing it  | 7/14/2019 4:01 AM |
| 4  | I think that students should have a rotation that includes telegenetics. I think that utilizing telegenetics should be included as part of the curriculum. ie. how telegenetics may be the same/differ from in person, different strategies that may be implemented in telegenetics vs in-person etc.   | 7/1/2019 8:30 AM  |
| 5  | Online to introduce the topic, on-site training if available to become comfortable with it. I am not certain if it would increase at my site but I think would be a valuable skill to have  | 6/26/2019 7:35 AM |
| 6  | Online training would be adequate.  | 6/18/2019 6:20 AM |
| 7  | I'm honestly not sure how much time would be required or the best strategy for teaching, but I do think this is necessary.  | 6/17/2019 8:56 AM |
| 8  | I'm starting the WFU GC program (well, I gave up anonymity in my employment answer above!!) I plan for all students to have a telegenetics rotation- currently contacting companies to see how we could role this out. Very important for GC training.  | 6/17/2019 8:17 AM |
| 9  | Part of clinical rotation and / or lectures   | 6/9/2019 12:34 PM |
| 10 | Educate on the basics of telegenetics and what subspecialties it is appropriate for. This could be done in GC classes   | 6/7/2019 11:24 AM |
| 11 | I feel like some on site telegenetics training in a setting that offer this would be ideal. If students were trained, I do feel like they would be more ready for this type of setting upon graduation.   | 6/6/2019 6:12 AM  |
| 12 | Have students spend time with geneticists and /or genetic counselors doing telemedicine. Make sure they participate in some cases delivered through telemedicine.   | 6/6/2019 5:34 AM  |
| 13 | On line experience would be most helpful  | 6/6/2019 5:05 AM  |
| 14 | practical exposure with practicing clinician/genetic counselor. Would need IT support.  | 6/5/2019 7:24 PM  |
| 15 | Training should be more about comfort counseling patients in a different clinical setting.  | 6/4/2019 10:39 AM |
| 16 | I don't think the counseling is much different but I had to get used to explaining what I was doing since the patient couldn't see everything (e.g. holding up the piece of paper so they can see that I am going to be drawing a pedigree, and letting them know that I'll be looking down from the camera at this time) Another thing is learning how to counsel without visual aids (or, if you use visual aids, making sure that you can navigate the software) I don't think that too much time needs to be dedicated to training since it's not much different from a regular visit if you don't have technical issues. | 6/4/2019 10:32 AM |
| 17 | On-site, as part of a clinical rotation, though this would likely be difficult for most programs to fulfill the requirement. If students are familiar with it and have positive feedback regarding it, then they are probably more likely to want to implement in a future position.  | 6/4/2019 6:00 AM  |
| 18 | Have not thought much about this - I think there are some on-line resources about this. Maybe resident can do a QI project (required) to get something started.   | 6/4/2019 4:35 AM  |
| 19 | I think all trainees should be exposed. Have a few lectures on the topic and have an opportunity to observe telegenetics in practice when available.  | 6/3/2019 2:37 PM  |

|    |  |                   |
|----|--|-------------------|
| 20 | Maybe 1-2 days to review the different approaches, technologies and to also use the equipment. The training should also include the billing criteria etc   | 6/3/2019 2:04 PM  |
| 21 | On-site training (at least an observation) Understanding of how and when it can be utilized. Understanding pros vs cons.   | 6/3/2019 1:15 PM  |
| 22 | not sure   | 6/3/2019 1:08 PM  |
| 23 | The logistics should be reviewed/understood and any differences that are known between face to face counseling versus telegenetics counseling.   | 6/3/2019 12:29 PM |
| 24 | I think it should be a rotation similar to those already in place  | 6/3/2019 12:11 PM |
| 25 | on-site training; may increase use of telegenetics in NC, but not necessarily in my clinical practice  | 6/3/2019 11:52 AM |
| 26 | teach as an alternate and equal to standard clinic visits  | 6/3/2019 11:45 AM |
| 27 | This could be done online or offsite if equipment was available (like a video platform student could access remotely). Otherwise it would have to be done on site. I think a rotation that included at least 5 cases of counseling and 5 cases of evaluation would be very sufficient but may be hard to get given the frequency of these patients at our office and length of current student rotations. I do think new hires coming in comfortable with telegenetics would increase uptake in a practice not currently providing (for GC based visits at least). | 6/3/2019 10:51 AM |
| 28 | On-site training would be preferred to online, but I could see value in various types of exposure and training to telegenetics. I don't think that requiring it in training programs would impact our plan for clinical use of genetic counseling.   | 6/3/2019 10:41 AM |
| 29 | Onsite as part of a clinical experience. Not an entire rotation.   | 6/3/2019 10:36 AM |
| 30 | Online and onsite training would be necessary. This needs to be explored by our site before I can speak to the barriers and utility of training to adequately address barriers.  | 6/3/2019 10:33 AM |
| 31 | Online education module with opportunity to observe/participate in telegenetics during clinical rotation   | 6/3/2019 10:22 AM |
| 32 | I think that all programs should require students to practice conducting a visit via telemedicine while they can be supervised.  | 6/3/2019 9:57 AM  |
| 33 | I think exposure in a clinical rotation would be a helpful experience for new trainees.  | 6/3/2019 9:57 AM  |
| 34 | I think it is important to gain the skills and understand the nuances of telegenetics whether you know you will be using the technology or not. Telegenetics is a useful tool, especially for those who have a difficult time traveling. The option/ability to bill will be an obstacle and not dictated by us. The hospital would need to be in support of the option and infrastructure needed. Online learning seems appropriate. If the hospital was on board with the option, then yes, I believe we'd increase its use.                                      | 6/3/2019 9:57 AM  |
| 35 | Some exposure in training would be great- perhaps a rotation at a site that provides some telegenetics services, attendance of telegenetics training/conference, etc. It may help with smoother implementation of telegenetics programs.   | 6/3/2019 9:51 AM  |
| 36 | exposure to the basic principles and some clinical/tele-clinical cases to familiarize with the challenges and differences from in person services.   | 6/3/2019 9:48 AM  |
| 37 | I think training could include only the differences/nuances a GC should pay attention to for telegenetics counseling vs. face to face counseling. In addition, I think learning about some of the physical/technical necessities and billing differences should be included in case a GC needs to advocate for, set up, answer questions about the set up and logistics of telegenetic counseling.   | 6/3/2019 9:30 AM  |
| 38 | I think a 1-2 day workshop in training (and for genetic counselors already in the field) would be fantastic and would make us all MUCH more comfortable with offering telegenetics services.   | 6/3/2019 9:21 AM  |
| 39 | I am not involved in telegenetics, so I'm not sure what is even needed, but it seems to be the future, so it should be included in training.   | 6/3/2019 9:16 AM  |

## Q28 Do you feel that telegenetics should be used more across North Carolina?

Answered: 54 Skipped: 2



| ANSWER CHOICES         | RESPONSES |
|------------------------|-----------|
| Yes                    | 92.59% 50 |
| No                     | 3.70% 2   |
| Other (please specify) | 7.41% 4   |
| Total Respondents: 54  |           |

| # | OTHER (PLEASE SPECIFY)   | DATE              |
|---|--|-------------------|
| 1 | See below  | 6/6/2019 5:34 AM  |
| 2 | I think I would need to have a better understanding of the telegenetics landscape and more insight into its practice as assessed by patients and providers before stating that it should be used more across NC.   | 6/3/2019 10:33 AM |
| 3 | Not sure, i'd be interested to know how many more patients likely to access these services rather than travel to a major center, which I feel are fairly well dispersed around NC. Travel to a telegenetics site might be needed too, so could still be a barrier. | 6/3/2019 9:30 AM  |
| 4 | Not sure about need given so many genetic groups across the state  | 6/3/2019 9:09 AM  |

## Q29 If you answered yes to question 28, how do you think this could be implemented? Are there resources that currently exist that should be explored further?

Answered: 40 Skipped: 16

| #  | RESPONSES   | DATE              |
|----|---|-------------------|
| 1  | Perhaps local Health Departments could be a patient location point.   | 7/14/2019 4:36 AM |
| 2  | I don't know  | 7/14/2019 4:31 AM |
| 3  | with regional genetic counselors, with the various centers, with support from the state   | 7/14/2019 4:01 AM |
| 4  | I need to be more familiar about services that are being used. I think that the implimentation of Myriad and Invitae telehealth will help physicians to use genetic services but I think there should be education in more rural parts of the states to physicians who **should be implementing genetics but are currently not, and how they can implement  | 7/1/2019 8:30 AM  |
| 5  | I think what makes it difficult is having the staffing that can take the blood and place the orders without us being there. That type of training I think is a barrier  | 6/26/2019 7:35 AM |
| 6  | In areas where access to genetics providers are limited, telemedicine could increase access. The state should consider funding centers with genetics providers to pilot services in other areas of the state.   | 6/18/2019 6:20 AM |
| 7  | I do not know much on this topic, but I wonder if the UNC system could offer advice and resources since I imagine they have tele-education offerings throughout the state.  | 6/17/2019 8:56 AM |
| 8  | Mayo Clinic has a Center for Connected Care. They explore new telemedicine opportunities across the enterprise and install the necessary equipment (it's minimal) on workstations. They also schedule appointments and troubleshoot IT problems prior to the appointment time. I realize that most places don't have the resources for this, but perhaps several institutions in NC could work together to develop a resource team?   | 6/17/2019 8:17 AM |
| 9  | I am honestly not aware of what resources are currently available to assist in starting such a clinic.  | 6/6/2019 6:12 AM  |
| 10 | For patients with difficulty traveling or other barriers to care at a major medical center, consider use of telemedicine through the academic institution or a telegenetics company.  | 6/6/2019 5:34 AM  |
| 11 | Reimbursement, reimbursement, reimbursement!!!!   | 6/6/2019 5:05 AM  |
| 12 | University based. Consider state supported telegenetics.  | 6/5/2019 7:24 PM  |
| 13 | I'm not sure, particularly since licensure for genetic counselors is not an option. Most major academic centers don't appear to be interested in generating a service that doesn't reimburse well   | 6/4/2019 10:39 AM |
| 14 | Being able to counsel patients while they are at home. The logistics of this is tricky  | 6/4/2019 10:32 AM |
| 15 | we first need a CPT code that will be reimbursed.   | 6/4/2019 9:42 AM  |
| 16 | It's probably difficult if the provider and the site where the patient is located are not part of the same system. Easiest for cancer genetics and possibly prenatal, but peds seems more difficult. Possibly utilizing county health departments, though these may be understaffed, underpaid, and overworked already.   | 6/4/2019 6:00 AM  |
| 17 | Need a strong advocate in the state who will take ownership of this and obtain funding for it.  | 6/4/2019 4:35 AM  |
| 18 | Not sure...   | 6/3/2019 2:37 PM  |
| 19 | We currently use a platform that is not super easy to use and requires pts to go to one site. If we could work out an easier platform that would allow pts to even be seen in their home (as long as billing could be worked out). It would be particularly helpful for those that live far away from our center or who have cancer and they would prefer not to get out more than necessary. If we could figure out an easier way to see cancer pts I think we could see more patients | 6/3/2019 2:04 PM  |
| 20 | State wide pilot study/grant funded/etc. RTI is utilizing this for GC purposes. They may a good foot in the door to approach for exploring experiences with this.   | 6/3/2019 1:15 PM  |

|    |   |                   |
|----|---|-------------------|
| 21 | not sure  | 6/3/2019 1:08 PM  |
| 22 | If telemedicine technology is already being used at specific medical centers, it should be possible for this technology to be used by genetics.   | 6/3/2019 12:29 PM |
| 23 | licensure for GCs to enable billing and/or statewide access to cancer teleGC for those deemed to be underserved or to have other defined transportation and access issues   | 6/3/2019 12:26 PM |
| 24 | Figuring out billing would be first priority and figuring out how to reach populations who need genetics services and asking them how they would like to be involved  | 6/3/2019 12:11 PM |
| 25 | use current telegenetics clinics in NC or other states as model   | 6/3/2019 11:52 AM |
| 26 | Limited resources, but should be a state supported initiative to provide services to locations more than an hour from a standard genetics clinic site (not a 1-2x/mo satellite) as a means of increasing access to care for the population with limited resources (which is a significant number of our pts at UNC)   | 6/3/2019 11:45 AM |
| 27 | I think definitely for GC indications it could be expanded to increase access to care. One might consider partnering with labs that are offering testing, as many include follow up GC as an included benefit - labs may contract these out. Or networking with cancer providers that are further away from a GC provider and are currently testing themselves with limited pretest GC. They might consider telegenetics if it was convenient for patient and technology was not expensive. Similar with an imaging center that is currently offering patients genetic testing (based on affiliation with a cancer genetic testing lab most likely) one could argue for a more detailed pre test GC session (compared to the 4 minute video currently offered). May have better luck being accepted if imaging center was affiliated with your employing hospital. IVF centers are offering more and more carrier testing, this also could be a relationship to explore post test carrier results review and help with coordinating partner testing or possibly PGD testing based on results (but several genetic carrier testing companies already offer this without additional charge so this may be difficult to get in with IVF clinic if additional costs would be incurred). There is also the consideration of opening up GC tele slots to cash pay patients that have questions about their DTC results. Tele slots could be used for f/u evaluation slots where detailed physical exam not as crucial, for patients referred for known diagnosis (like outside CMA found a microduplication, etc and parents need education). I am still skeptical that new eval patients, especially children or poorly cooperating patients, are getting a comparable visit when physical exam is through the tele platform. Based on my experience, I would insist on an in-person visit for my child for a new genetics eval for a condition with physical findings - I feel I should advocate for patients to get the kind of care I would want (which is tele for GC indications, f/u evals, or new evals with a known diagnosis ahead of time). In cases of tele visits that fall outside of this category I think cases should be reviewed on a case by case basis to see if appropriate for tele (average intelligence 13 yo referred for Marfan, tele new eval ok. 3 yo boy with autism and poor cooperation - strongly encourage in person visit). | 6/3/2019 10:51 AM |
| 28 | Reimbursement   | 6/3/2019 10:36 AM |
| 29 | I wish I knew- we have a whole room in clinic with telemed equipment and in nearly 5 years here I've never seen it used. I think the biggest issue is execution. There needs to be a deliberate team of providers and support staff to onboard the tech.  | 6/3/2019 10:35 AM |
| 30 | Video conferencing  | 6/3/2019 10:22 AM |
| 31 | Telegenetics could be used to reach patients who live in more rural areas or have difficulty travelling.  | 6/3/2019 10:20 AM |
| 32 | Being new to the telemed services, I still have a lot to learn about current resources, etc   | 6/3/2019 9:57 AM  |
| 33 | As hospital systems are expanding throughout NC, I feel as though Genetic Counselors should be accessible to patients at more of an organization's locations.   | 6/3/2019 9:57 AM  |
| 34 | Over 10 years ago, WF was using telegenetics in the prenatal setting. I am unsure why the process was discontinued and at point the technology is probably too old. As each major hospital buys up the smaller private practices, facilities closer to home for a patient/family to go to will increase. It is possible that the option is already in the long term plans for the option to exist.  | 6/3/2019 9:57 AM  |
| 35 | Cancer and prenatal counseling (and GC only pediatric genetic counseling) are particularly conducive to telemedicine. Hospitals with multiple clinic locations could offer telemedicine from their main location to clinics further out or partner/have a contract with other hospital systems to provide virtual genetic counseling.   | 6/3/2019 9:53 AM  |

|    |  |                  |
|----|--|------------------|
| 36 | state specific 'guide' on issues/solutions for other NC telegenetics programs  | 6/3/2019 9:51 AM |
| 37 | for large centers, telemedicine "centers/offices" could be created and each clinic (cancer, prenatal, peds, etc) could sign up for time slots. Online application for appointments for patients would be helpful, though a nurse clinician or referral coordinator would need to screen referrals to deem appropriate. Results discussions in particular could be done this was as not physical exam is needed and could allow for billing whereas phone calls does not. | 6/3/2019 9:48 AM |
| 38 | I think the challenge for prenatal genetics is that it is ideal to offer telemed GC for pregnant patients if there is an MFM and qualified sonographer on site. There are not many opportunities for this and there are not enough prenatal genetic counselors currently employed to handle more volume.   | 6/3/2019 9:21 AM |
| 39 | Not sure   | 6/3/2019 9:16 AM |
| 40 | GC licensure could help with billing issues  | 6/3/2019 9:02 AM |

## Q30 Any additional comments?

Answered: 14 Skipped: 42

| #  | RESPONSES  | DATE               |
|----|--|--------------------|
| 1  | na   | 7/14/2019 4:31 AM  |
| 2  | great survey chad! from chad   | 7/14/2019 4:01 AM  |
| 3  | I think it is great to begin learning more information about telegenetics in NC so we can begin learning how to learn from other states to strengthen our telegenetics programs.   | 7/1/2019 8:30 AM   |
| 4  | It appears that the rate of no shows is just as bad as in person visits. I think a better use of the resources should be to help families with transportation, over night stays to facilitate visits to medical centers  | 6/18/2019 6:28 AM  |
| 5  | Telegenetics appropriate for counseling patients and follow up patient visits. I do not like it for new patient evaluations that requires a physical exam.   | 6/17/2019 10:15 AM |
| 6  | Not at this time, thank you!   | 6/17/2019 8:56 AM  |
| 7  | In regards to reimbursement, for now telemedicine for genetic counseling by a GC will be billed at \$175 per "unit"- not sure what a unit is, maybe 30 min? This will be self-pay, not billed to insurance.  | 6/17/2019 8:17 AM  |
| 8  | thanks for doing the survey - the more this is discussed the better chance of getting something started.   | 6/4/2019 4:35 AM   |
| 9  | The billing aspect really needs to be better figured out and then approach it in a way that is more user friendly like many of the commercial genetic counseling companies are doing.  | 6/3/2019 2:04 PM   |
| 10 | The possibility of telegenetics was raised several years ago at WFBH, for genetic counseling. The possibility of this service was dropped because of billing concerns. It would be interesting to raise up this option again to determine if other departments are currently utilizing telemedicine. If they are, how are they doing it and what obstacles have they already overcome.   | 6/3/2019 12:29 PM  |
| 11 | pushing the state to provide an infrastructure and potentially some form of purchasing/leasing of equipment would be useful  | 6/3/2019 11:45 AM  |
| 12 | n/a  | 6/3/2019 10:22 AM  |
| 13 | This would be difficult to implement in our metabolic clinic since we do labs quite frequently and unless the patient location was another hospital that might be difficult.   | 6/3/2019 10:20 AM  |
| 14 | In our experience, cancer genetic counseling by telemedicine is very analogous to in-person genetic counseling. It requires training staff at regional sites and paying attention to the details of coordinating visits/blood draws/etc. At the very least, telegenetics saves money for patients who don't have to drive to a larger city. (See Gleason, Mariah et al. 2018 NSGC poster "Experience of Telehealth Cancer Genetics Practice in a Large Community Healthcare System") | 6/3/2019 9:57 AM   |