

Supplement 1. Survey Questions

Genetic Testing in the NICU

Although many of us work at multiple institutions, please answer the following questions related to the NICU in which you primarily practice.

When caring for your patients, how important is it to know whether or not they have an underlying genetic diagnosis as the explanation of their medical problems?

- Not at all important
- Slightly important
- Very important
- Extremely important

Are there clinical geneticists available for consults in your NICU?

- Yes
- No

Does your NICU send exome sequencing as a clinical test (i.e. not through a research study)?

- Yes
- No
- I don't know

If NO: Is exome sequencing performed as a research test (i.e. by enrolling in a research study)?

- Yes
- No
- I don't know

If YES: Who is typically responsible for ordering the exome sequencing test? (check all that apply)

- NICU team
- Genetics team
- Other service [free text]

IF YES: Who is responsible for obtaining consent for exome sequencing? (check all that apply)

- NICU team
- Genetics team

- Other service [free text]

IF YES: How long does it usually take for exome sequencing results to come back?

- Less than two weeks
- Two weeks to one month
- One to three months
- More than three months

Does your NICU send genome sequencing as a clinical test?

- Yes
- No
- I don't know

If NO: Is genome sequencing performed as a research test?

- Yes
- No
- I don't know

If YES: Who is typically responsible for ordering the genome sequencing test? (check all that apply)

- NICU team
- Genetics team
- Other subspecialty team
- Other service [free text]

IF YES: Who is responsible for obtaining consent for genome sequencing? (check all that apply)

- NICU team
- Genetics team
- Other subspecialty team
- Other service [free text]

IF YES: How long does it usually take for genome sequencing results to come back?

- Less than two weeks
- Two weeks to one month
- One to three months
- More than three months

What is your comfort level with selecting the appropriate genetic test for babies in your NICU?

- Very uncomfortable
- Somewhat uncomfortable
- Neither comfortable nor uncomfortable
- Somewhat comfortable
- Very comfortable

For each of the following tests, please choose the response that best reflects how the test is ordered in your NICU:

	Karyotype	Chromosomal microarray	Single gene sequencing test	Gene panel	Exome sequencing	Genome Sequencing
The NICU team can order this test independently (e.g. without obtaining permission from an oversight committee or involving the clinical genetics team)						
The NICU team can order this test independently after getting permission from an oversight committee						
The NICU team can order this test under the guidance of a clinical geneticist or genetics team but without permission from an oversight committee						
The NICU team can order this test under the guidance of a clinical geneticist or genetics team and with permission from an oversight committee						
We cannot send this test in my NICU						
We cannot send this test in my NICU now but are planning to do so in the future						

In your opinion, are there babies in your NICU who need the following tests but you are unable to send them?

	Yes	No
Karyotype		
Chromosomal microarray		

Single gene sequencing test		
Gene panel		
Exome sequencing		
Genome sequencing		

Demographics

What is your age?

- Under 30
- 31-40
- 41-50
- 51-60
- 61-70
- Over 70

How many years have you been in practice as a neonatologist?

- Less than five years
- 5-10 years
- 11-20 years
- More than 20 years

The NICU where you primarily work is:

- Level one
- Level two
- Level three
- Level four

In which region of the country do you practice? [drop down menu with state selection]

What is the name of hospital in which your NICU is located? (This will allow us to consider group responses from the same NICU). [free text]

Supplement 2

Overall, 21 NICUs had more than one respondent. The data below present the number of times that individual respondents from the same NICU had differing responses.

1. Are there clinical geneticists available for consults in your NICU?:

1/21 with differing responses

2. Does your NICU send exome sequencing as a clinical test (i.e. not through a research study)?

2/21 with differing responses

3. Who is typically responsible for ordering the exome sequencing test? (check all that apply)

10/21 with differing responses

4. Who is responsible for obtaining consent for exome sequencing? (check all that apply)

8/21 with differing responses

5. How long does it usually take for exome sequencing results to come back?

8/21 with differing responses

6. Is exome sequencing performed as a research test (i.e. by enrolling in a research study)?

1/21 with differing responses

7. Does your NICU send genome sequencing as a clinical test?

5/21 with differing responses

8. Who is typically responsible for ordering the genome sequencing test? (check all that apply)

3/21 with differing responses

9. How long does it usually take for genome sequencing results to come back?

2/21 with differing responses

10. Is genome sequencing performed as a research test?

3/21 with differing responses

11. For each of the following tests, please choose the response that best reflects how the test is ordered in your NICU:

Karyotype: 6/21 differing responses

Chromosomal microarray: 10/21 differing responses

Single gene: 14/21 differing responses

Gene panel: 16/21 differing responses

Exome sequencing: 11/21 differing responses

Genome sequencing: 14/21 differing responses