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COVID-2019 – Impact on Newborn Screening

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Newborn Screening Program
February 11, 2021

Spring is a Time of Rebirth

In newborn screening we are *always* focused on:

- New births

But we became even more focused on:

- Early discharges
- Availability of specialists
- Parental hesitancy
- Provider office closures
- Maintenance of essential operations
- Staff and familial well-being

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Springing Into Action

- Needed to think outside of the box
- Efficiencies in the pipeline were accelerated
- Engagement of staff for all perspectives:
  - Data entry
  - Laboratory sections
  - Clinical operating requirements
  - Staff well-being
  - Follow-up

Had to ramp up emergency preparedness in the event many staff became ill, while remaining fully operational

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Systems Based Approach – Review of Each Section

- External Changes/Challenges
- Accessioning
- Data Entry
- Follow-up
- Laboratory
- Other (Staff; IT; Infrastructure)

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External Challenges

- **March 2, NYC hospitals started to inform us parents refusing to come for repeats**
- **Outpatient clinics closing; families not allowed back to floor**
- **March 23, Couriers no longer allowed to some nursery floors; changing pick-up locations**
- **March 24, alerted about possibility of early discharge (12-24 hours)**
- **March 30, SCC staff redeployed in some cases to ED and ICU; telemedicine**
- **Newborn coordinators no longer able to process paperwork or accept presumptive calls**
- ***March 15, reduce by 50% non-essential staff + essential staff;***
- ***March 19 reduce by 75% non-essential staff + essential staff;***
- ***March 20 only essential staff;***
- ***March 28 full NY PAUSE– businesses closed***

Accessioning

- March 25 – Protocol for handling of forms from babies of COVID+ moms
- March 26 sent FAQ; >9,500 email blast to HCPs with education/info to get forms alert
- Saturday testing initiated to increase time to find babies with time critical screening results; manage workflow
- COVID-19 public, HCW and other essential workers, helped with serology accessioning April 20 - early May.

Data Entry

- March 13 – Moved staff to a different building to decrease density; free up COVID-19 testing space
- March 16 – Entry of demographic data from the scanned image (new); individual forms; now scanned as ‘packs’
- March 19 – Electronic tracking sheet so staff could check out packs to do remote data entry
- March 23 to present – Set up administrative staff and grant staff as possible to work remotely to reduce density for non-laboratory staff

Follow-Up

- March 13 – Moved follow-up staff to a different building to reduce density; free up space for virus / serology testing; March 30 staff working remotely
- March 26 – 30 Updated language on reports: borderlines risk-based; collect repeats when required v. when practical; TPN language and referral of sub-optimal specimens at regular not just emergency levels
- March 30 – Emails to SCC Directors / staff; alerted to changes; requested they update emergency contact info
- March 30 – Call with CF SCCs; check-in to review CFF guidelines
- April 1 – Created educational “disorder” packets for PCPs in the event baby only shows up there
- April 21 – COVID seroprevalence calls through ~May 7

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Laboratory

- March 28 – Saturdays: mail, punch, run IA, IMD, Hg, LSD; begin remote data entry; LSD data analysis; test for SUAC and ALD; monitored need for Saturday testing week to week (effective May 15)
- March 13 -27 –Set up remote connection to instruments and data analysis for lab sections
- Some staff reassigned to analyze data at night; set up MS/MS retests; referrals are ready in the AM; (Mon-Sat test results); same for LSDs if needed
- March 23 – Set up separate work areas to control density
- Cross train staff in MS/MS, LSD/ALD and galactosemia; train ‘non-essential’ staff from environmental MS/MS laboratory on MS/MS, mail and punching; removed GALT subjectivity
- Constant contact with vendors

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Other (Staff and IT)

- Managed workload based on need for operations
- NBS staff – COVID accessioning after regular work day; serology prevalence study >15,000 samples from public and healthcare workers; 6:00AM open mail, assess quality and punch prior to NBS mail arriving for ~3 weeks; now routine virology staff trained
- IT offsite; implemented ALL changes remotely and rapidly
- All essential staff report; temperature checks upon arrival; masks went from requested to mandatory (April 6)
- Cancellation of meetings that are not essential; Webex as possible; social distancing

Initials, 2 Hospitals, per week
Hospital closed labor and delivery and sent deliveries elsewhere

70
60
50
40
30
20
10
0

spec/week

1/1/2019 4/11/2019 7/20/2019 10/28/2019 2/5/2020 5/15/2020 8/23/2020 12/1/2020 3/11/2021

Date Accessioned (Week Ending)

Data compiled by Denise Kay, PhD

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Age at initial specimen collection, weekly, 1/11/2019-10/30/2020

Proportion specimens

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 95 97

Date accessioned (week ending)

0_0-11 1_12-23 2_24-26 3_27-29 4_30-32 5_33-35 6_36-47 7_>48

>48 hr coll
36-47 hr coll
33-35 hr coll
30-32 hr coll
27-29 hr coll
24-26 hr coll
12-23 hr coll
0-11 hr coll

N= 399,832; proportion of specimens
Data compiled by Denise Kay, PhD

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Age at repeat specimen collection, weekly, 1/11/2019-10/30/2020

Proportion: 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%

Date accessioned: 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96

1_0-23 | 2_24-47 | 3_48-71 | 4_72-95 | 5_96-167 | 6_168-335 | 7_>336

>336 hr coll

168-335 hr coll

96-167 hr coll

72-95 hr coll

48-71 hr coll

24-47 hr coll

0-23 hr coll

N= 72,386; proportion of specimens;
Data compiled by Denise Kay, PhD

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Newborn Screening is a System

Insurance
Education
Parents
Clinics
Specimen Acquisition
Clinical Care Coordination
Policy Makers
Courier Service
Hospitals
Ombudsman
Demographic Entry
BABY
Customer Service
Information Technology
Private Laboratory
Reporting
Quality Assurance
Laboratory Testing
Military
Medical Consultants
Stakeholder Groups
Medicaid
Regulations
Advisory Committee
Physicians
Nurses

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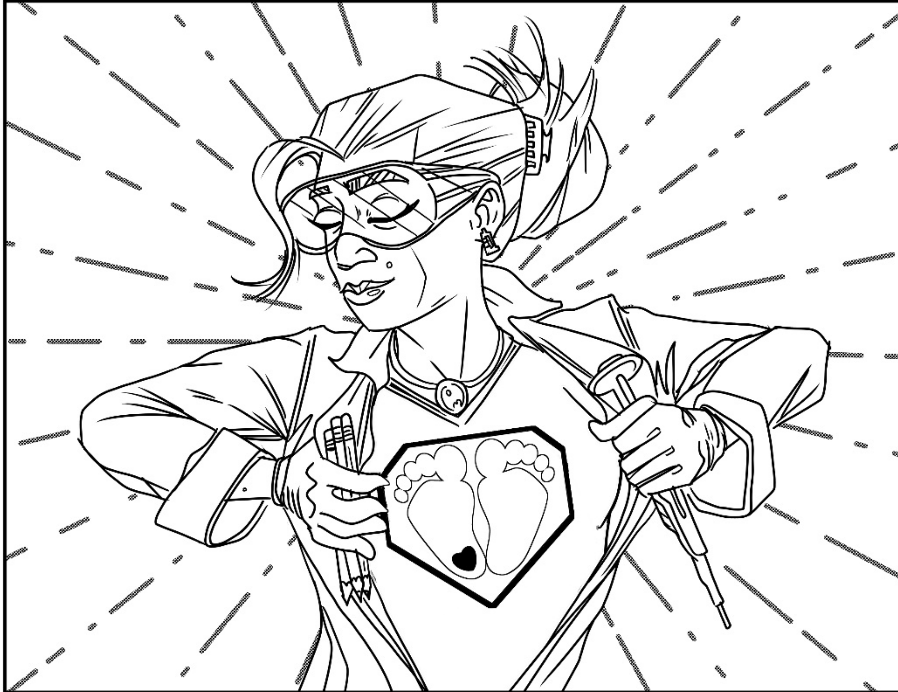
Teamwork – Thank you the NYS NBS Staff!



Credit: Shane Moore

- Exhausted
- Invigorated
- Impressed
- Exhilarated
- Settled into a new normal

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