Background:

Through emergency funding available in response to the COVID-19 pandemic, Colorado was able to identify and fund key projects related to the sharing of COVID related lab results. Funded projects by organization included:

- CORHIO Lab Data Feed to CDPHE - complete
- CORHIO Patient and Population Level Dashboard – complete with users being added
- CORHIO Hospital Bed Availability Data Feed and Dashboard - complete
- CORHIO Data Feed FROM CDPHE - complete
- CORHIO COVID Notifications Feed – complete
- CORHIO Data Analytics and Notifications – in progress
- CCMCN COVID Surveillance System - implemented with additional users and functionality being added
- QHN Data Feed from CDPHE – feed complete; data to end users in progress
- QHN ADT Data to HCPF – in progress

In addition to the data focused projects, funding was made available for connecting providers to the HIE and telehealth projects.

Activities:

Through a process of written surveys and oral interviews, information was gathered by various stakeholders assessing how the projects were identified, implemented and the impact (Appendix A).   Additionally, a technical mapping diagram of current and future COVID-19 data flows and systems in Colorado was created to assist in the evaluation and discussion of state infrastructure investment and maintenance. The diagram not only identifies funded key projects mentioned above, but also seeks to map all other major systems in Colorado that store, process and communicate COVID-19 data (Appendix B).

Key Takeaways:

Based on the level of involvement by the stakeholder, responses varied regarding project identification, implementation and most importantly impact and future needs. As expected responses were focused on individual organization projects although there was applicability across all investments. It should be noted that OeHI was seen as a strong collaborator with the ability to work across agencies.

Identification and Implementation:

- 70% strongly agreed and/or agreed that the right people were engaged at the right-time for decision making
- 50% agreed that the goals and needs were identified and clearly stated when identifying which projects could potentially be funded
- There is a continued struggle with redundant functionality and investment across the state. The more that we can leverage existing partners and infrastructure and not re-build or stand up new silos the better the utilization of limited resources and funding.

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Impact:

- Care teams and patients received information quicker
- The lab data into the HIE is valuable and should be expanded to include all data that is being sent to the state
- CCMCN end users felt that the dashboards were helpful and relevant. Having the ability to see population and patient level data supported their roles.
- The data feed from CDPHE is providing results to customers that would not easily had gotten this information otherwise. In addition, the infrastructure build for this projects was leveraged for other projects.
- Symptom Tracker work has demonstrated what an effective partnership can look like between an HIE and the state
- Investments in projects that was related to improving the rate, quality and content of Electronic Lab Data or Electronic Case Data were beneficial

Future Considerations:

- Focus on providing data and not duplicating analytics
- Avoid project duplication – though some duplication is required based on system complexity
- Focus on automating the work and leveraging existing data connections as there continues to be a large amount of manual data exchange
- A data warehouse that could support state level dashboards and provide analysts with needed tools
- API based connectivity between data systems.
- Public health solutions that can be scaled up and down quickly as needed

Lessons Learned:

For most respondents, this was their first pandemic, and all agreed that everyone did their very best under extreme and uncertain circumstances; however, there is a need for a nimble and flexible system by which rapid response can be deployed. Existing contracting constraints and not having the ability to fund projects immediately caused delays in implementation. It was noted however, that even in the midst of the need for hastened reaction, there must be thoughtful consideration to contracting and implementation including requirements development and testing.

Leveraging existing infrastructure, focusing on use of technology, determining end user need and building upon core organizational strengths will be key in future investments.

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Survey Questions

A total of 18 stakeholders representing seven organizations were identified for input. Eleven individuals participated in the written survey component, five stakeholders in the oral interviews and 4 end users were also polled for their perspective. Organizations represented include: CORHIO, QHN, CCMCN, CDPHE, OeHI, HCPF and an FQHC.
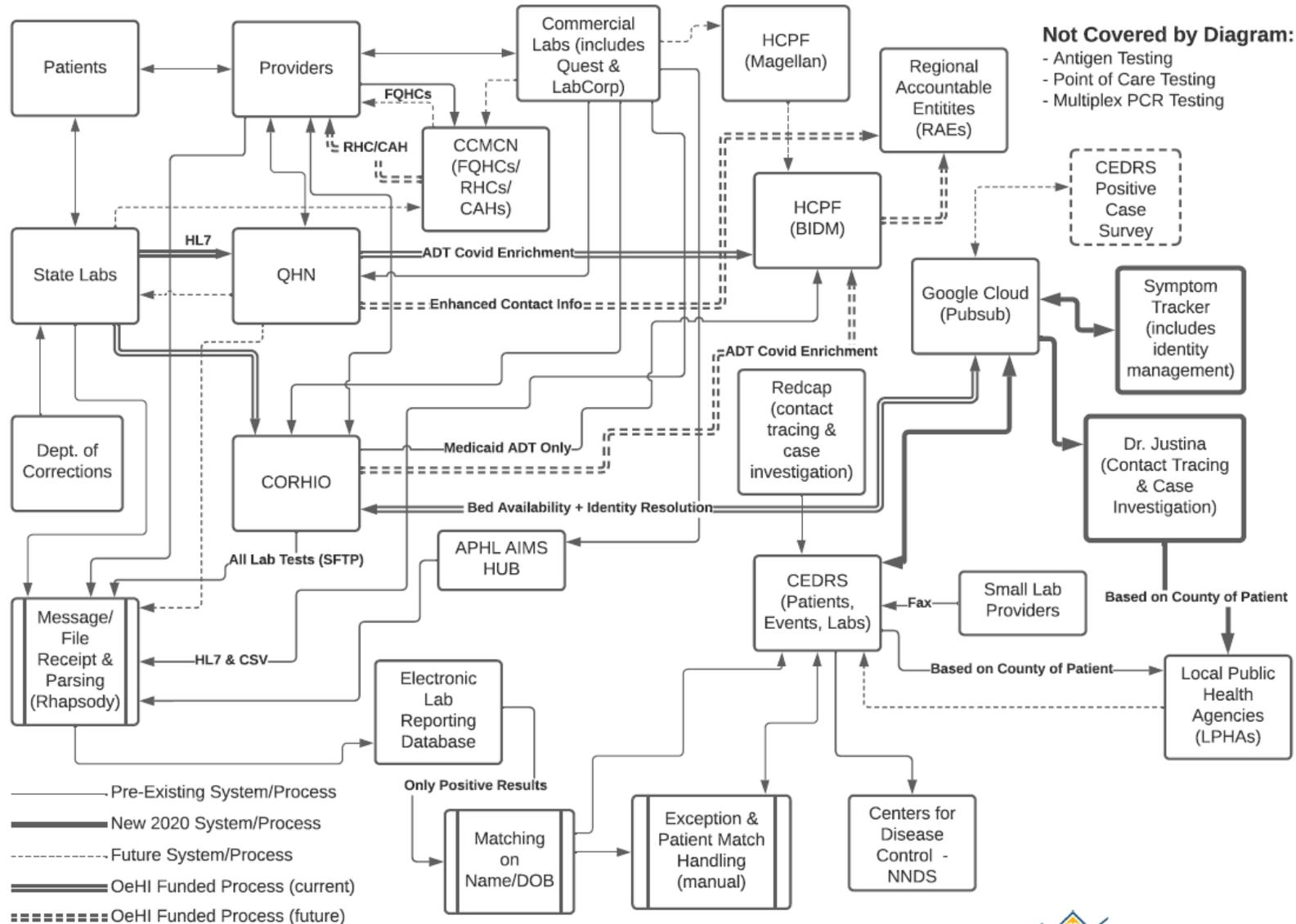
PROCESS Questions – Written Responses

1. The right people were engaged at the right-time for decision making.
2. I was engaged at the right time to make informed decisions.
3. Goals and needs were identified and clearly stated when identifying which projects could potentially be funded.
4. I was informed and made aware of other projects that could potentially impact my work to avoid possible duplication.
5. Based on your knowledge of the funded projects, which projects were good investments of COVID emergency funds and need to be expanded upon?
6. Based on your knowledge of the funded projects, which projects did not pan out as good investments of COVID emergency funds and need to be discontinued?
7. What new projects would you like to see undertaken in the next phase of the COVID response that were not in the initial phase?
8. Responding to an emergent situation can highlight what is already working well – what Department or OeHI core competencies, processes, strengths or approaches worked well and should be leveraged for the future.
9. Emergent situations can also expose everyday challenges – what do you identify as a challenge that is not unique to the COVID response? Do you have any recommendations for how to tackle these challenges in day-to-day workflow?
10. Is there anything else that you would like to share regarding the process and projects?

PROJECT Questions – Oral Interviews

1. Which Project (s) do You Identify With?
2. Is the Project Fully deployed?
3. Do you feel that the project is meeting its intent/goals?
4. Is the project providing information that is valuable to your work?
5. Does the project have a plan for sustainability?
6. If yes, briefly describe the sustainability plan.
7. Who are the end users of the project?
8. How many end users are currently participating?
9. What have been the challenges of the project?

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Colorado Covid-19 Lab Test Systems and Data Flows (PCR & Antibody Testing) - As of September 2, 2020

Not Covered by Diagram:
- Antigen Testing
- Point of Care Testing
- Multiplex PCR Testing

Legend:
- Pre-Existing System/Process
- New 2020 System/Process
- Future System/Process
- OeHI Funded Process (current)
- OeHI Funded Process (future)

Note: All data includes both negative and positive lab test results (unless otherwise specified)

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