Accurate Individual Data Matching

**M1. Standards and Best Practices** 2015-2017

1. ONC and SDOs should standardize the minimum recommended data elements to be consistently included in all queries for patient clinical health information, and to be used to link patient clinical health information from disparate systems.

[John Blair] Agreed

[Shelly Spiro] Take into consideration NCPDP (Pharmacy SDO) work in this area. As an example ONC worked with MITRE on the PDMP in recognizing recommended data elements (MITRE Project Final Report) <http://www.healthit.gov/sites/default/files/work_group_document_integrated_paper_final.pdf> 3.2.2 Identity Recommendations pages 34-37. This work continued with NCPDP and S&I Framework initiative [http://wiki.siframework.org/PDMP+%26+Health+IT+Integration+Homepage](http://wiki.siframework.org/PDMP+&+Health+IT+Integration+Homepage) with national pilot tests. The data included private HIPAA sensitive data. The timing is right if the right examples are used.

[Carl Dvorak] Our interoperability experience shows us that standardizing the minimum data elements for queries would be helpful for interoperability participants. We agree that ONC and SDOs are appropriate stakeholders to undertake this initiative. We are happy to volunteer our expertise with queries if that is helpful. We suggest that in addition to the data elements, it will be important to standardize and discretely represent demographics. For example, a street address should be able to be represented by its constituent parts and different ways of representing data elements (Av, Ave, Avenue).

As ONC and SDOs undertake this work, it will be helpful if they ensure that it is possible to use more than the minimum when additional information is known.

Our matching experiences leads us to recommend the follow attributes: mother’s maiden name, aliases (first & last), SSN, known MRNs, email, additional phone numbers and the Patient’s ID number at the requesting site to ensure the reverse link can more easily be made.

[Beth Morrow] In selecting data elements for queries, it is important to include (and, maybe even leverage) identifiers that are unique to diverse populations. So, for instance, an ID match for a patient is enhanced when parents are a data element in the match. This data element also supports linking records that should be linked (for example, mother with child, to populate family health history).

[Kitt Winter] How do we handle existing identity data?

Do organizations that have existing patient identity data elements need to update not only the format, but validate the quality of all existing data to ensure that it is complaint with the recommended data elements?

We need to be aware that organizations will move forward at their pace to implement the recommended data elements, best practices and matching. How do we measure success during this period of transition?

[Larry Garber] Need to also define best practices for formatting names and addresses (e.g. prefixes, suffixes, apostrophes, etc…)

[Troy Seagondollar] What data elements substantiate the minimum? These need to be clearly listed.

1. Through coordinated governance, public and private stakeholders should work with standards development organizations to require a set of data elements in all individual identity query and record linking transactions.

[John Blair] Agreed

[Shelly Spiro] Same as the comment in 1.

[Carl Dvorak] Public and private stakeholders will want to adopt industry standards that are developed as part of step 1 above.

We should also remember that people change addresses routinely and allow for queries to contain and to process historical addresses. When one moves cities, they also often move doctors.

In addition, we should include Payers who may have data sets that are helpful correlating patients across both cities and providers.

[Melissa Goldstein] The phrase “through coordinated governance, public and private stakeholders should” … gives me pause throughout these sections. I understand that we are not tasked with delving through the governance issues, but these statements vis a vis interoperability beg many questions, particularly if this work is supposed to happen in the next 2+ years. Who is doing the coordinating? Which public and private stakeholders? Who decides who gets to come to the table? Who ensures that this “requirement” will happen? Who implements the “requirement”? What happens in the case of noncompliance? Etc.

[Troy Seagondollar] We need a unique patient identifier (similar to the SS#) before any of this will work.

1. Through coordinated governance, public and private stakeholders should establish and document best practices for the following processes: patient registration, patient verification of information and patient updates and corrections to information.

[John Blair] Agreed

[Carl Dvorak] Improved patient matching can be achieved without a need for formal coordinated governance in this area. We suggest focus be put on the other steps instead.

[Beth Morrow] It is very important to involve the patient in the verification of information, provide updates, and corrections – as well as in identifying which record matches are correct and which are not, especially where there is a question. This process is being used in online applications for health coverage under the Exchange.

[Melissa Goldstein] See comment 2

[Troy Seagondollar] ONC must insist that a unique patient identifier be legislated. There are already workflows to verify patient identity at the point of registration for patients who have active medical records at the place where they are requesting service.

1. Through coordinated governance, public and private stakeholders should designate the API capabilities necessary to support individual identity search and individual identity linking transactions.

[John Blair] Agreed

[Shelly Spiro**]** There are lessons to be learned from the PDPM models related to handling API’s and leveraging current State PDMP’s and State HIE models.

[Carl Dvorak] Existing protocols such as XCPD, PIX, and PDQ already define the APIs to do patient matching, so we are uncertain what this step suggests.

[Melissa Goldstein] See comment 2

[Larry Garber] Should include API development for Relationship Listing Services. This goes beyond simply presenting patient demographics, but also identifies and classifies patient relationships to healthcare organizations/providers (including primary care physician, care manager, etc…), sources of data (e.g. registries, advance directives, PACs images, etc…), and patients’ authorizations related to these. This API needs to support both populating the Relationship Listing Service, as well as querying the service. With a Relationship Listing Service, EHRs can know where to find data on patients or where to automatically send information on patients for subscription services.

[Troy Seagondollar] This should be a priority before building any other data interfaces. Sometimes just knowing that your patient was seen in “x” facility helps to coordinate care. So before a minimum data set is established, the notification to provider “Jones” that his patient “Smith” was seen in facility “y” would be of a great benefit.

**M1. Standards and Best Practices** 2018-2020

1. Health IT developers should reliably include standardized identity matching data elements in exchange transactions.

[John Blair] Agreed

[Shelly Spiro] Same as the comment in 1.

[Carl Dvorak] We agree that HIT developers will want to include standardized identity matching data elements in exchange transactions. The standard set of data elements will need to be defined with sufficient lead time to ensure they can be incorporated into relevant HIT.

[Melissa Goldstein] All Health IT developers? Certain developers? Who will reach out to them and/or ensure compliance?

[Troy Seagondollar] Absolutely before anything else.

1. Through coordinated governance, public and private stakeholders should ensure that identity matching services use standardized attributes in standardized data formats to match individuals to their data for care coordination, individual use and access.

[John Blair] Agreed

[Shelly Spiro] Same as the comment in 1.

[Carl Dvorak] What is envisioned to be the role of coordinated governance here, can you clarify? This seems more appropriate for standard setting and certification.

[Melissa Goldstein] See comment five.

[Larry Garber] Should also encourage local or regional deployment of Relationship Listing Services based on APIs developed in Phase 1. EHRs should also support these APIs to interact with the Relationship Listing Service.

[Troy Seagondollar] We use two forms of patient identification e.g., name, DOB, maiden name, associated addresses… before administering care e.g., medications, labs, x-rays… There is no reason that while sharing data this can’t be done, as well.

1. Through coordinated governance, public and private stakeholders should identify, test and adopt additional identity matching data elements, including voluntary data elements.

[John Blair] Agreed

[Shelly Spiro] Same as the comment in 1.

[Carl Dvorak] Market forces and interest in better match rates will drive testing and adoption of new voluntary data elements; coordinated governance is not necessary in this area. A helpful role for governance would be to ensure that other requirements to do not inhibit testing and experimentation with voluntary data element and strategies to improve match rates.

[Beth Morrow] Should add “practices” to this list (i.e., “… matching data elements and practices …”). “Practices” includes such steps as patient involvement in confirming/rejecting questionable matches, and is used in (3) above.

[Melissa Goldstein] See comment five.

[Troy Seagondollar] Yes. When I reset my passwords I am asked about past addresses I have lived or places of employment to validate my identity. This is an acceptable way of verifying patient identity, as well.

1. As evidence suggests, ONC and SDOs should standardize additional, required elements for identity matching.

[John Blair] Agreed

[Shelly Spiro] Same as the comment in 1.

[Carl Dvorak] Ongoing work to improve matching is appropriate.

[Beth Morrow] Same as above re. adding practices.

**M1. Standards and Best Practices** 2021-2024

1. Providers and health IT developers should use best practices for data quality and algorithms to enhance identity matching accuracy in a majority of identity matching services.

[John Blair] Agreed

[Shelly Spiro] This is the right action. Recommend still using the PDMP model as a good use case.

[Carl Dvorak] We support ongoing improvement to matching accuracy and data quality, but we are uncertain what is intended by this goal. Prior to inclusion in the roadmap, the goal might require further clarification and discussion.

[Melissa Goldstein] Again, how does this happen? Who coordinates and reaches out to providers (RECs?). Is it assumed this will be a requirement in MU? How else would it be enforced in the case of providers? In the case of developers, who is in charge of implementation and/or enforcement?

**M2. Pilots and Further Study** 2015-2017

1. Through coordinated governance, public and private stakeholders should develop and pilot tools and technologies for establishing performance metrics for individual identity, query and internal individual matching/record linking.

[John Blair] Agreed

[Shelly Spiro] Take into consideration NCPDP (Pharmacy SDO) work in this area. As an example ONC worked with MITRE on the PDMP in recognizing recommended data elements (MITRE Project Final Report) <http://www.healthit.gov/sites/default/files/work_group_document_integrated_paper_final.pdf> 3.2.2 Identity Recommendations pages 34-37. This work continued with NCPDP and S&I Framework initiative [http://wiki.siframework.org/PDMP+%26+Health+IT+Integration+Homepage](http://wiki.siframework.org/PDMP+&+Health+IT+Integration+Homepage) with national pilot tests. The data included private HIPAA sensitive data. The timing is right if the right examples are used.

[Carl Dvorak] Can you clarify the role coordinated governance would play in this work? This work might benefit from simple ONC defined measurement criteria or occasional audits or studies done upon request.

[Melissa Goldstein] Again, how does this happen? Who coordinates and reaches out to providers (RECs?). Is it assumed this will be a requirement in MU? How else would it be enforced in the case of providers? In the case of developers, who is in charge of implementation and/or enforcement?

[Kitt Winter] We need to be aware that organizations will move forward at their pace to implement the recommended data elements, best practices and matching. How do we measure success during this period of transition?

[Troy Seagondollar] Appropriate to do after the unique patient identification criteria and the minimum data set is created.

1. ONC will coordinate with industry stakeholders and other HHS initiatives to test scenarios that represent a variety of matching settings with the purpose of providing further direction for scalable solutions, standards and best practices.

[John Blair] Agreed

[Shelly Spiro] This is the right action. Recommend still using the PDMP model as a good use case example.

[Carl Dvorak] This makes sense and would help to spread best practices.

[Melissa Goldstein] Which industry stakeholders?

[Troy Seagondollar] Appropriate to do after the unique patient identification criteria and the minimum data set is created.

1. ONC will coordinate with industry stakeholders to study voluntary collection of additional identity attributes, which may include biometric technologies, cell phone number, email address, etc.

[John Blair] Agreed

[Shelly Spiro] This is the right action. Recommend still using the PDMP model as a good use case example.

[Carl Dvorak] We agree that this is an important area to study and that ONC is well positioned to coordinate stakeholders for this work.

[Melissa Goldstein] Which industry stakeholders?

[Troy Seagondollar] These are good examples as to how to verify identity.

**M2. Pilots and Further Study** 2018-2020

1. Stakeholder input requested

[Shelly Spiro] Stakeholder input was requested with the NCPDP and S&I Framework initiative <http://wiki.siframework.org/PDMP+%26+Health+IT+Integration+Homepage> with national pilot tests. The data included private HIPAA sensitive data. The timing is right if the right examples are used. PDMP will be a nationwide solution by this timeframe.

[Troy Seagondollar] As in the original ONC charter – establish the baseline for identity management, validate the patient identity, share the minimum data set, share relevant and pertinent data as requested by the receiver, close the loop through a verification of receipt of the data by the receiver back to the sender.

**M2. Pilots and Further Study** 2021-2024

1. Stakeholder input requested

[Shelly Spiro] Same as comment 4

[Troy Seagondollar] I have always struggled with the term Learning Health System. It would be great if someone could enlightened us as to what this means. With a strong definition it is up to interpretation, if it is up to interpretation then confusion and lack of confluence and rigor will occur.

**M3. Adoption** 2015-2017

1. ONC among other stakeholders should begin coordination and dissemination of best practices on identity matching.

[John Blair] Agreed

[Shelly Spiro] This is the right action. Recommend still using the PDMP model developed with ONC’s help as a good use case example.

[Carl Dvorak] We agree this is an important task.

[Melissa Goldstein] Which “other” stakeholders?

[Troy Seagondollar] Appropriate to do after the unique patient identification criteria and the minimum data set is created.

**M3. Adoption** 2018-2020

1. A broad range of health care settings, including long term care, infusion centers and mental health facilities should consistently use identity matching technologies and processes.

[John Blair] Agreed

[Shelly Spiro] This is the right action. Recommend still using the PDMP model developed which included SAMSHA (behavioral health's <http://www.dpt.samhsa.gov/pdf/pmp_otp_2011_letter.pdf> ) and is a good use case example. The model should work where any health care provider provide care.

[Carl Dvorak] This is a good goal but we should find a plan that will help us reach it. That plan may be to create specific outreach to vendors and users in these spaces to share best practices. It may also simply turn out to be a natural outcome if identity matching practices are refined and accepted in most other healthcare systems as best practices.

[Melissa Goldstein] How will these non-EPs come into the fold?

[Troy Seagondollar] This should be happening as the process of unique patient identification evolves not left behind as with MU. Outpatient services such as these are cardinal in the health and welfare or our patients and will be used in a much greater many in the coming years. As it is today, chemotherapy is rarely given in the hospital setting and mental health is done in community settings. Long term care will continue to evolve as more retirement centers increase the services they render as well as the reduction of nuclear family models where grandparents are cared for in their children’s homes. Thus it is vitally important that mobile technologies are able to capture, record, share, and receive personal health data just as in any other (health care) setting.

**M3. Adoption** 2021-2024

1. All health IT systems should continue to exchange data that includes standardized identity matching data elements.

[John Blair] Agreed

[Shelly Spiro] This is the right action and timeframe.

[Carl Dvorak] We agree that health IT systems that exchange data should include standardized identity matching data elements.

We would be cautious about words such as “all” when there could be types of health IT that have purposes where identity matching is not needed (for example, submission of non-identified, aggregated data to registries).

Also, we should be careful to recognize that within some settings, and ID number does exist and can be trusted – for example, after initial identity is established among exchange partners. In those cases it would not be necessary to send more information.

[Troy Seagondollar] Why would it change?

1. Through coordinated governance, public and private stakeholders should ensure that data quality rates within source systems and identity matching services are within acceptable levels as defined by agreed upon performance metrics.

[John Blair] Agreed

[Shelly Spiro] This is the right action and timeframe.

[Carl Dvorak] We agree with the goal of improving data quality and match rates, but are concerned that this proposal is likely to be significantly complex and will need careful consideration and further discussion before timelines and specific approaches can be determined.

[Melissa Goldstein] See original comment on coordinated governance

[Troy Seagondollar] Breech reporting is already an embedded law. Obviously if the data is incorrect internal quality control will manage it and report it as necessary. Data integrity, or lack thereof, is not taken lightly in health care.

Reliable Resource Location

**N1. Development of New Architecture and Standards 2015-2017**

1. Through coordinated governance, public and private stakeholders should identify the architecture and workflow for resource location as part of a learning health system, including the individual and IT system actors, roles and access requirements.

[John Blair] Agreed

[Shelly Spiro] As an example ONC worked with MITRE on the PDMP in recognizing recommended data elements (MITRE Project Final Report) <http://www.healthit.gov/sites/default/files/work_group_document_integrated_paper_final.pdf> 3.2.2 Identity Recommendations pages 34-37. This work continued with NCPDP and S&I Framework initiative [http://wiki.siframework.org/PDMP+%26+Health+IT+Integration+Homepage](http://wiki.siframework.org/PDMP+&+Health+IT+Integration+Homepage) with national pilot tests. The data included private HIPAA sensitive data. The timing is right if the right examples are used.

[Carl Dvorak] In this time frame, we should consider a simpler focus on an institutional level provider directory rather than larger goal as stated here.

Many of these concepts sound good in theory but history has shown them to be more difficult to inventory and standardize. The 2015 – 2017 timeframe is upon us already and we have many more important and fundamental areas to focus on.

We should focus on standardizing national immunization registries, specialty registries and basic exchange so that it operates at a ubiquitous level.

[Melissa Goldstein] See original comment on coordinated governance

[Kitt Winter] Resources could be located by a number of related attributes. (name, physical address, aliases or prior names, other relationships with other entities)

We have an example of an organization that has 1,200 various names and address within their community that is related to one electronic address for interoperability.

[Larry Garber] These services should include more than just resource location, but needs to also identify resource capabilities (e.g. which messaging and document standards are supported).

Should also include standards for automatically populating and maintaining the directories that are part of this architecture. EHRs know better than any other source the moment any provider becomes part of an organization, the capabilities of that organization for exchanging data, how to exchange data with that provider, and when that provider no longer is a user of that EHR. One can imagine that EHRs could thus be an integral component to automatically populating and maintaining a provider directory.

[Troy Seagondollar] The AHRQ will be developing best practices as a result of increased exposure to findings, interventions, and outcomes. However, for most of this work, unique patient identification is not warranted – simple demographics - age, sex, race, lifestyle, place of employment, living conditions.., will be enough to build profiles on populations in relation to diseases and outcomes.

2. Through coordinated governance, public and private stakeholders should prioritize the participants and services that are to be discoverable using resource location and identify a near-term goal for the first small set of resources to be included in an initial implementation.

[John Blair] Agreed

[Shelly Spiro] Same as the comment 1.

[Carl Dvorak] This will be paired with N1.1.

[Melissa Goldstein] See original comment on coordinated governance

[Troy Seagondollar] I am not sure what this is asking(?)

3. From the architecture, SDOs and health IT developers should determine or develop standard(s) and API(s) for discovering participants and resources (including other directories if the architecture is federated), determine whether any of the current standards or legacy services already incorporated in products can be used or extended and develop a Roadmap to implementation of new standard(s) and API(s), if necessary.

[John Blair] Agreed

[Shelly Spiro] This is the right action and timeframe.

[Carl Dvorak] The analysis will want to ensure that new standards are not developed if existing standards are already sufficient.

This timeframe is also very tight and we might better focus our efforts on shoring up the base of adoption and program basics given the industry feedback to date.

This is a reasonable objective but should be moved out on the calendar.

[Melissa Goldstein] Will they be provided any funding with which to do this work?

[Troy Seagondollar] This is not a priority. Typically patients self refer based on recommendations or because of health insurance network restrictions. If the providers need a specialist they will call a friend.

4. Through coordinated governance, public and private stakeholders should identify rules of the road for participating in distributed management of resource location, if appropriate for the architecture and actors. This includes establishing policies and procedures for operation of resource location services, including curation of directory information to maintain data quality.

[Shelly Spiro] This is the right action and timeframe.

[Melissa Goldstein] See original comment on coordinated governance

[Troy Seagondollar] This is not a priority. Typically patients self refer based on recommendations or because of health insurance network restrictions. If the providers need a specialist they will call a friend.

5. Through coordinated governance, public and private stakeholders should work with SDOs and health IT developers to demonstrate standard(s) and API(s) in a trial implementation, beginning with the prioritized set of resources.

[John Blair] Agreed

[Shelly Spiro] This is the right action and timeframe.

[Carl Dvorak] Piloting the standards and processes is an important step. Since it is dependent on earlier steps in N, this does not seem feasible in 2015-2017?

[Melissa Goldstein] See original comment on coordinated governance

[Troy Seagondollar] This is not a priority. Typically patients self refer based on recommendations or because of health insurance network restrictions. If the providers need a specialist they will call a friend.

6. Through coordinated governance, public and private stakeholders should develop a glide path for moving from current provider directories to future resource location techniques.

[John Blair] Agreed

[Shelly Spiro] This is the right action and timeframe.

[Carl Dvorak] Like many areas of interoperability, we imagine that resource location will evolve and will need to be monitored. If opportunities for improvement exist we will want to prioritize them on future roadmaps.

This topic feels overly complex and will likely lead to confusion at a time we should focus on solving the institutional and individual level directories question in the most straightforward manner possible.

[Melissa Goldstein] See original comment on coordinated governance

[Troy Seagondollar] This is only important when the provider is referring outside of their network. This is not a priority. Typically patients self refer based on recommendations or because of health insurance network restrictions. If the providers need a specialist they will call a friend.

**N1. Development of New Architecture and Standards** 2018-2020

7. Stakeholder input requested

[Shelly Spiro] Agree and hopefully by 2018 the PDMP process will be well established and be a good example to use in obtaining stakeholder input.

[Beth Morrow] As this work matures, goals/actions need to extend beyond clinical health resources and broadened to address social determinants of health. As such, should include wider community resources and support services that improve health and health outcomes -- i.e., resources that provide services that can help a patient as well as resources that have or wish to query health-related information that supports whole patient-centered care (with patient approval). I am not sure of the time frame. Think that in 2018-20 work should begin to develop resource location services and directories that address wider scope health picture (non-clinical government, community, and support services), and in 2021-24, the LHS should include widened resources. Such phasing might flow nicely out of point (2) in this section.

[Troy Seagondollar] Of course.

**N1. Development of New Architecture and Standards 2021-2024**

8. Stakeholder input requested

[Shelly Spiro] Agree and hopefully by 2018 the PDMP process will be well established and be a good example to use in obtaining stakeholder input.

[Troy Seagondollar] Lofty goal if I knew what this meant I would be able to give better input.

**N2. Refinement and Adoption of Standards and Best Practices 2015-2017**

1. As an interim step, ONC will work with others to encourage initial uptake of current provider directory activities

[John Blair] Agreed

Currently, we are sharing HPD directories with six HISPs. Directories are updated on a weekly basis through sharing of CSV files. We have over 150,000 active providers in our directory. 60,000 from our network and 90,000 from the other five networks that share with us. Edge EHR vendors and provider organizations receive weekly updates of our provider directory and reconcile it with their local directory. We have deployed the federation capability tested at the IHE connectathon. No one is using federation in production yet. That will begin second or third quarter of this year.

[Shelly Spiro] Agree with right action and timeframe.

[Carl Dvorak] We agree that work with provider directories is important.

It’s not clear what this task encompasses.

ONC and CMS should simply create an institutional provider directory from MU attestation data. Provide it as a raw file and keep it up to date. Make it available for download by vendors of CEHRT or Meaningful Users. This should be the yellow pages for interoperable providers.

Providers outside the MU program should be allowed to submit their information if they chose.

[Melissa Goldstein] Which “others”?

[Troy Seagondollar] Yes.

2. ONC will recommend to CMS that NPPES implement support for the provider directory information query API and data model as specified in the IHE HPD Profile. CMS should maintain Direct addresses and ESI in NPPES

[John Blair] Agreed

[Shelly Spiro] I think the action and timeframe is right for government providers, but there has to be a similar expectation for the private sector care providers.

[Carl Dvorak] It would be helpful to be able to electronically query a CMS database to identify provider Direct addresses. We caution that there are other steps (such as certificate sharing) which will be necessary for the addresses to be useful, but having access to the addresses is a current barrier.

[Kitt Winter] The ESI concept needs to be flexible and extensible. (e.g. Direct email addresses, eHealth Exchange HomeCommunityIDs and Assigning Authorities, FHIR URLs)

NPPES would need to handle multiple names, aliases, prior names, physical addresses (payment address, treating address, ROI address), relationships to other entities along with workflow or profile information. NPPES lacks Health Information Exchange information.

General Question – How do we trust the data in a directory? Who populates it? How is the information verified?

[Troy Seagondollar] Yes

3. CMS/HRSA/OIG should advance the proposed effort to consolidate/synchronize national credentialing support systems

[John Blair] Agreed

[Shelly Spiro] I think the action and timeframe is right for government providers, but there has to be a similar expectation for the private sector care providers.

[Troy Seagondollar] Yes. However, typically patients self refer based on recommendations or because of health insurance network restrictions. If the providers need a specialist they will call a friend.

4. ONC and other certification bodies will determine how to support provider directories through certification processes

[John Blair] Agreed

[Shelly Spiro] I think the action and timeframe is right for government providers, but there has to be a similar expectation for the private sector care providers.

[Carl Dvorak] We agree that adopting provider directory standards and testing those standards in EHR certification would be an appropriate area of focus for future interoperability certification. We note that standards would have to be ready for adoption, published, and available with high quality certification testing tools with sufficient lead time for this to be achievable in 2015-2017.

[Melissa Goldstein] Which “others” certification bodies?

[Troy Seagondollar] This is done at the state level, thus at the federal level this is not a priority. Typically patients self refer based on recommendations or because of health insurance network restrictions. If the providers need a specialist they will call a friend.

5. ONC will lead the effort to coordinate across federal agencies on the use of existing standards (e.g. provider directory standards)

[John Blair] Agreed

[Shelly Spiro] I think the action and timeframe is right for government providers, but there has to be a similar expectation for the private sector care providers.

[Carl Dvorak] This is important and will be necessary for #4 above. New standards should not be considered if appropriate standards already exist. Again, it will be important to make the directory available in a native downloadable format similar to some of the CMS big data initiatives.

[Troy Seagondollar] This is done at the state level, thus at the federal level this is not a priority. Typically patients self refer based on recommendations or because of health insurance network restrictions. If the providers need a specialist they will call a friend.

6. ONC will support testing through its Standards Implementation and Testing Environment (www.sitenv.org)

[John Blair] Agreed

[Shelly Spiro] Agree with right action and timeframe.

[Carl Dvorak] This is important and will be necessary for #4 above.

[Troy Seagondollar] Yes and make sure that stakeholders are involved to determine feasibility prior to establishing the NPRM. SITE does a good job at allowing input into the results but not the process.

**N2. Refinement and Adoption of Standards and Best Practices 2018-2020**

7. Through coordinated governance, public and private stakeholders should adopt national standards for locating participants and resources.

[John Blair] Agreed

[Shelly Spiro] Agree with right action and timeframe.

[Carl Dvorak] This seems similar to steps in N1.

[Melissa Goldstein] See original comment on coordinated governance

[Troy Seagondollar] Yes

8. Through coordinated governance, public and private stakeholders should adopt guidance on data quality, maintenance and update processes.

[John Blair] Agreed

[Shelly Spiro] Agree with right action and timeframe.

[Carl Dvorak] This seems similar to steps in N1.

[Melissa Goldstein] See original comment on coordinated governance

[Troy Seagondollar] This is very broad. What data quality, what maintenance, and what processes?

9. Through coordinated governance, public and private stakeholders should work with health IT developers to identify and publish best practices for resource location operational issues that could include data quality, maintenance and update processes

[John Blair] Agreed

[Shelly Spiro] Agree with right action and timeframe.

[Carl Dvorak] This seems similar to steps in N1.

[Melissa Goldstein] Which health IT developers? See original comment on coordinated governance

[Troy Seagondollar] Yes.

**N2. Refinement and Adoption of Standards and Best Practices 2021-2024**

10. Stakeholder input requested

[Shelly Spiro] Agree with right action and timeframe.