

Meeting: CSTE Data Standardization – Special DEST Session(s) – Combined Meeting Address Structure in Message Mapping Guides

Date: March 15, 2024

Attendees: 74

CSTE (2)	PHAs (36)	CDC (32)
Becky Lampkins Gillian Haney	<u>DSWG Co-Chairs</u> Molly Crockett MA	Abhilasha Saxena GDIT Doris McGinness GDIT Luis Hernandez GDIT
JMC (4) Erin Kough Grace Mallard Sam Spoto Sara Sanford	<u>DEST Members</u> Amy Lai AZ Caleb Lyu CA LA County Karene Thomas-Watts CO Kayleigh Nerhood GA Shawna Stuck GA Luis Vela ID Andria Apostolou IHS Jim Sainsbury IN Lunden Espinosa IN Dimple Patel KY Sue Soliva MA Elizabeth Shiffman MD Mario Beltran MD Ed Hartwick MI Aaron Bieringer MN Hanna Chakoian MN Mary Vance MN Teresa Schillo MN Stella Tsai NJ Stephanie Moberg NM Lea Moser NV	Myrna del Mar González GDIT Shawn Arshad GDIT Alejandro Perez Brenna VanFrank Erin Miller Gonza Namulanda Hailey Vest John Gerstle Kristen Delea Lauren Korhonen Laurie Barker Lesliann Helmus Marion Rice Meeyoung Park Melissa Pagaoa Nicole Gallaway Noreen Kloc Peter Daly Rachelle Oseni Renee Boehmert Robert Pratt Sara Johnston Scott Grytdal Shelby Lyons Sonia Singh
Unknown Affiliation (0)		

	Theron Huntamer NV Jacki Griffin NY Vajeera Dorabawila NY Beth Isaac NYC EJ Klingler NYC Rob Arciuolo NYC Tim Liao NYC David Kim OR Michael Eberhart PA Eman Addish PA Philadelphia Steve Eichner TX Cher Levenson WA Misty Johnson WI Rachel Klos WI	Sydney Adams Veronica Burkel Shaoman Yin Yuritzy Glez Pena
--	--	---

**SOME INDIVIDUALS DIALED IN; THE NAMES ARE UNKNOWN, AND THEY ARE LEFT OFF OF THE ATTENDANCE*

HIGH-LEVEL MEETING NOTES (REFER TO MEETING SLIDES FOR MORE DETAIL AS NEEDED):

Meeting Ground Rules and Updates

- We welcome everyone's opinions and active participation from jurisdictions, CDC programs, CSTE membership, etc.
- As we work through data elements/classes, we strive for 80/20 consensus.

Data Element-Specific Teams (DEST)

- DEST member expectations – members are not expected to write documents, lead meetings, or prepare slides. The goal is to keep members engaged in conversations around content during and between meetings.
- There is an expectation of active participation in polling, document review, discussion, and other input during and between meetings.
- **[Action Requested]** Please sign up for upcoming data elements on the [DEST Sign-Up here](#).
- After Exposure/Risk/Underlying Conditions and Signs/Symptoms/Clinical Manifestations wrap-up, the next data elements will be
 - Identifiers

Core Data: In Scope for DSWG

- Focus on core data for surveillance for transmission to CDC within selected data classes.

- We will work to identify standard definitions and value sets within that definition of core data.

Core Data FAQ

- Identification as core does not mean it is required to fill in or send an answer for every core data for every case; it is okay to leave it blank or unknown.
- Data, elements, and data classes should be considered core if they are relevant for many conditions.
- A good way of thinking of this is if we were to create a GenV3 MMG, would it make sense to include that data element here as core? For this larger data class, signs and symptoms are very condition specific. Making a data class like this core would mean “should this data class be structured the same way and sent in a consistent manner for all conditions”, even if the value set or list of symptoms changes.

MMG Structure for ERU and SSCM: March 8 call recap

ERU and SSCM Data Classes 1

- You might remember this slide from last week but I wanted to make sure that we had a very condensed review today. As a reminder, last month we met individually as groups to discuss data classes of Exposures, Risk Factors, and Underlying Conditions as one team and Signs, Symptoms, and Clinical Manifestations as another team. We will continue working through the details of these data classes in April, but thus far, the groups have defined the four data classes as core. Each data class can be made up of many condition specific data elements.
- For example, the exposure data class may contain data elements asking about things the case may have been exposed to during the incubation period of the condition, such as “within an exposure period did the person get a tattoo or consume a certain food”. The risk factors data class may contain data elements that capture behaviors or circumstances that may make a person more likely to have the condition, such as if the person is a healthcare worker. The underlying conditions data class may capture information about relevant diagnoses the patient has had previous to the condition being reported. Finally, the signs, symptoms, and clinical manifestations data class will capture information on the condition specific signs, symptoms and other clinical manifestations experienced by the case.
- As these data classes are all highly condition specific, the individual data elements contained within them will not all be decided as a part of this standardization work. When implemented in the future, the data elements for a particular condition within each data class will be defined by CDC in the same way that CDC defines the values in current MMGs. These data classes being core means that the group agrees there should be a standard bucket to place this information in across all conditions, although the bucket can be empty if the data class doesn’t apply to a condition, and we will make a recommendation for a standard structure for these buckets. Today’s conversation continues to focus only on structure, and not these definitions.

ERU and SSCM Data Classes 2

- Current message mapping guides contain data elements from these data classes using three separate structures. They can be transmitted as individual Y/N/U questions, each representing one data element. They could also be transmitted as a repeating element, which allows transmission of multiple data elements within one OBX segment. Think of this as one question where you can “select all that apply” for the

response. Lastly, they can be transmitted as repeating groups, which allow for many data elements in the same class to be transmitted as paired “question” and “answer” OBX segments for each data element.

- That concludes our rapid review and now I will go over some of the main takeaways from last week’s conversations and polling.

8 March Discussion Takeaway Points – CDC

- On this slide, I have noted some, but definitely not all, of the points made primarily by CDC programs regarding the use of the three types of data structures.
- Individual questions are the burdensome to add to new and existing mmgs. These require a full OMB review and clearance in order to be added. This can be very time and resource intensive.
- Repeating elements would allow more flexibility as changes to value sets do not require full OMB review; however it is acknowledged that this option not allowing for the differentiation between no and unknown is not ideal.
- Repeating groups allow for updates to the value sets without OMB clearance hoop-jumping and also allows for potential extra data points to be added to each value. For example, It is possible to capture whether or not a person was exposed to raw milk as well as capturing the date of the exposure.

8 March Discussion Takeaway Points – STLTs

- Some, but once again not all, of the points made by the jurisdictional informaticists on last weeks call are summarized here.
- Individual questions are often the most straightforward to map with the least amount of data wrangling from the front end of the system to the back end.
- Repeating elements seemed to be the preferred mechanism by informaticists over repeating blocks but the group was quick to acknowledge that their SMEs might not prefer this option. That said, some states already have this built into their systems and mapped as it is often an efficient option for case investigators to mark things like symptoms present.
- Repeating groups can be quite an effort to map successfully. For some systems, subsequent mappings are easier once the initial ones are completed. For others, it’s not that simple and each one for each mmg is a real undertaking. It was also acknowledged that on these calls we are hearing from states with people to help with this type of work and that not all jurisdictions have equal amounts of resources and help. While there are Technical assistance programs provided to states, this can only go so far as some of the work has to be done internally at the jurisdiction.

8 March Poll: Preferred Structure Poll

- Here is a quick review of the first poll from last week’s call. I think that the second poll tripped us all up as we were trying to adjust too many things on the fly at that point.
- But I think that this first one did give us some good food for thought. As you can see, the repeating block was the most popular options in both jurisdictional people and CDC programs people. I did a little more digging into the votes and was able to assess that if I looked at the votes of

jurisdictional informaticists and other people most likely to be building HL7 messages on the jurisdictional side, it was a bit more of a three-way split between the three options than what is shown in these numbers.

- This is the conclusion of the summary and I want to end on the following note – as I looked through the notes and votes of the last call, it seems like the variation in difficulty is likely connected to the variation in surveillance systems. Which unfortunately means that like so much in US public health, nothing is going to be the best fit for everyone. But I want to say thank you all for your contributions last week. We know so much more now than we did at the beginning of that call.
- Chat
 - Tim Liao: Agree that repeating groups can be quite an effort to map successfully and also to configure in Rhapsody

Structure Discussion

Data Class Indicator

- First we're going to talk a little bit about the idea of a data class indicator since we didn't get to touch on this last week. A data class indicator is an individual data element that exists separate from the structures we've talked about. An example of this in the picture here shows a data class indicator of “Did the subject have any underlying causes or prior illnesses” with a responses limited to Y/N/U. This exists as it's own OBX segment separate from the below repeating group for underlying conditions. An answer of “no” to this indicator value may remove the need to transmit the repeating group, or in the case of a repeating element question it can add value to explaining why the repeating element is absent. The implementation of this question varies across jurisdictions, and at the jurisdictional level may be independent of or in some cases calculated secondary to responses to other data elements.
- A “Symptoms present” indicator is present in the Minimum Dataset for Case Notification During an Emergency, developed by a separate CSTE working group. Whether or not a data class indicator should be transmitted as part of each of these data classes is likely data class dependent, as it may be more valuable for signs and symptoms compared to something like exposures. This group will not be discussing if a data class indicator is useful for a certain data class. However, we want to inform those data class specific conversations with information from this group on the implementation of a question like this.

Data Class Indicator 2

- So opening this up for discussion, does anyone have any input on whether this type of data element is hard or easy to implement for an informaticist? Does it differ based on the structure of the data class it references? For instance, if signs and symptoms are sent as individual questions versus a repeating group, do those structures affect the ability to populate and transmit a symptoms present indicator?
- Discussion
 - Jacki Griffin: I can only speak for NYS experience, but it isn't very difficult for us to send a data class indicator. Our surveillance system is kind of structured this way, so we have those indicators on a lot of our exposures and our risks and symptoms for the vast majority of our forms. So for us, this is fairly easy and we prefer this method.

- Teresa Schillo: This is pretty easy for us to implement in MN as well. I think it can be confusing sometimes. For example, we're working on the Lyme and TBRD MMG, there are some data class indicators that need to be included for Lyme but not TBRD which I find kind of odd. So I think consistency is the key if you have a multi-disease type of MMG
 - Sam: The point you made there is the goal of what we're trying to do with the group. Define something like the signs and symptoms data class as core and going forward this will mean you will know what to expect and how it will be structured across the board.
- Misty Johnson: I agree with what's been said for WI. We send the one data class indicator as itself and if that's yes then our form will display, "tell me about your underlying conditions." Shouldn't be an issue.
- Chat
 - Ed Hartwick: I don't think it would be difficult one way or another, from MI's standpoint
 - Jacki Griffin: consistency would be great!!

Poll 1 – Data Class Indicator

- We're using polls here to get the temperature of the group as a whole, as not everyone will be vocal about sharing their opinions. The polls today are going to really only be for informaticists that have experience working to structure their jurisdiction's data into case notification messages. The first poll here is on what we just talked about- does the presence of something like a "symptoms present" indicator have a large effect on how easy or hard the transmission of that data class is?
- Discussion
- Chat
 - Shawn Arshad: this question about the indicator outside the repeating group right?
- Poll Question: Would presence of a data class indicator have any effect on the ease or complexity of mapping data classes into case notification messages?
- Options: Yes, it would make transmission of these data classes easier | No, it would make transmission of these data classes more complicated | It doesn't have much effect on data transmission | I need to think about it more
- **See results [here](#)**
- 53% said "It doesn't have much effect on data transmission"

Structure Concerns 1

- We touched on this last week but I want to make sure that we didn't miss anything. Thinking back to the structures we talked about last week and the general goal of what this group is working towards, if there is a future new standard MMG format that will apply to a new condition not yet in your surveillance system, is there a particular structure for these data classes that will make that process easier for your jurisdiction? And similarly, for conditions already in your system but not onboarded into an MMG, would one structure over another make a difference? Or would just knowing what structure to consistently expect be helpful enough?

- Jacki Griffin: This is really where consistency matters for us. Once we have a structure set up, if we know we can consistently map future diseases the same way it will reduce our development time for implementation of these MMGs by leaps and bounds. We really struggle with the lack of consistency, and sometimes it can take us a long time to implement these MMGs because they differ so much disease over disease.
- Ed Hartwick: I would agree with that. I think for us (MI) we're kind of agnostic to a lot of the ways things would be constructed, but having that same structure shows once we figure out our groove to be able to do it, it sticks, we can expect the same thing over and over. I think there might be a nod to this on the other side of the receiving site as well. I think we're hearing a lot that it's not necessarily that big of a deal on the sending side to construct it one way or another. I think maybe we need to make sure that on the receiving side that it's equally one way or another, from either a technical standpoint or from an onboarding standpoint too.
- Teresa Schillo: One of the difficulties with implementing MMGs is that the way that CDC would like to receive the data is not the way that the epidemiologists necessarily collect it. So the struggle is, how do you translate it? From the way they group the questions, the way they ask things, do they use "check all the above," ... So it's not just how they collect the data but then they're taking that and putting it into other structure that's needed. So I feel like even if we have a standard structure that we're expected to be sending in the MMG, that doesn't necessarily solve the problem about how it's being collected in the first place. I don't see that the epidemiologists are going to change how they collect the data just to say "oh it's easier for MMG if you collect it this way."
- Sam: Does anyone think that having this consistency of what we're working towards in these groups is saying, "if it comes from the data standardization workgroup, signs and symptoms are a data class that is core and should be sent for all conditions in this way. And we say they need to be sent as a repeating group, which means we're expecting answers of yes, no, or unknown for all of them. Would that standardization effort here help in your jurisdictions to encourage the epidemiologists to be asking questions in a certain way if they know that across the board it's going to be that way?"
- Misty Johnson: Every MMG that comes out now wants industry and occupation codes. In WI, and I'm guessing other states are the same, we have a standard section for industry and occupation and each disease. Maybe they want a couple, specific questions to that disease but the bulk of it is the same. Whenever we get to that point of mapping, that's an easy win. It's a standard section that we put into all of our forms now going forward. It's a good way to demonstrate that yeah if it is standardized it is going to make it easier. Your last question, would epis think of changing the way they collect it to suit the MMG. I'm not an epi but have worked with epis the last 8 plus years and I'm inclined to say "no." One good example of this is what we're talking about with symptoms or exposures as a repeating group. The way that we should put that in our forms would be a cute little repeating section that says name, symptom, and "yes, no, or unknown" and then if you want to add another one, click this cute little button and it'll give you another role. Then you can pick out another risk or symptom, etc. Nobody wants to do that, that's not quick. We actually want things listed out because our epis know what risks they're looking for, they know what symptoms they're looking for, then they just want the cute little buttons. And I can make that happen, but I do have to take and rewrite that whole schema to hard code in all these vocabulary values and tell it "ok for this vocabulary value point here, here's your concept code and your narrative. And then right here in this field, that's where you're going to get your indicator. So it's doable, it's something I've done before, so when I see a new MMG, I know what to do. It does take time though and I'm just hesitant to think that the questions would be asked in a way to just suite the MMG."

- Jacki Griffin: The epi's that are doing the work are removed from the MMGs, so we have conversations and they assist in mapping. But for the most part, they're different people and different mindsets. The informatics folks/technical folks think one way and epis think another way. In New York, we would prefer to let our business needs drive our system versus the other way around.
- Lesliann Helmus: One of the mentions you made was that the repeating group would have the symptom, and then "yes, no, or unknown" for each of them. I think what we want to communicate is "yes, no, or unknown" would be the choices but it doesn't mean that it needs to be filled out for each of them. So if your system had one where they just marked yeses, that might be what you would send – just the yeses. But if you also allow them to mark no and you get a clear no, it would be valuable to have that sent. I do understand you want to let the business needs map the match, the way the data is collected. I think we're maybe talking about a different business need that helps to guide the way the data is sent, and so separating how it's collected from how it's sent. I realized it is a mapping job that goes between them, but we had talked last call about some of the advantages to using a group where it allows us to add things like if you need a date or something else for a data element, there's a way to build that in which you don't have if you just simply have a yes list.
- Lesliann Helmus: Curious, and I don't know if you folks are the ones who have the answer, but you talked about having a form where the people go out on paper and collect things, do most of the folks out in the field collect on paper? Or do they have a PDA or laptop or tablet that they use to collect data on? Is there a sense of that?
- Jacki Griffin: Within NY there's a pretty good mixture among the counties. It tends to be the larger counties that are a lot more technically savvy where they will go directly into the system when they're doing the interview, but we do still have counties that actually do everything pen and paper and then data enter. Even within NY it's a mixture.
 - Lesliann: It may be mixed by program too, one work area may do something and another might not
 - Jacki: absolutely, I think TB is predominantly paper where you know where you doing STI things are more controlled especially if there's partner service activities happening in there that would be a different situation.
- Chat
 - Amy Lai: We are having the same struggle as Teresa
 - Misty Johnson: WI agrees with MN
 - Elizabeth Schiffman: @Teresa Schillo (MN) - thank you for saying this!! It is so true (coming from an epi 😊)
 - Misty Johnson: good point, @Jacki Griffin – NYS. I feel it's my role as an Infomaticist, to bridge the gap for epis; I don't expect them to understand xmls, etc...just as I rely upon them to help me understand disease-related info that I need to understand, too.
 - Tim Liao: Agree that it makes sense to just send 'Yes' responses on certain questions.
 - Theron Huntamer: We would need the CDC case reporting forms "paper" to be updated for the DIS to collect the data. How the data is collected on a form might not be the match my system.
 - Amy Lai: THis might be a training thing but most of the time people will mark a symptoms as Yes but don't always mark a symptoms when it's No or Unknown. Our partners in Rare area uses PDF due to internet limitation. and sometime it can be personal preference

Structure Concerns 2

- A second discussion we wanted to have that we didn't get to next week is really about if informaticists have any concerns or questions that should be highlighted in our recommendations documents for these data classes. So these classes are a little different than writeups we have

had previously- if you think about something like industry and occupation our recommendations document outlines “Here are the four specific data elements described as core”. These recommendation documents will have a format that is something like “the data class signs, symptoms, and clinical manifestations are considered core and should be transmitted for all applicable conditions. The structure recommended for this data class in an HL7v2 message is... whatever structure”. Currently, our work is to define data elements as core, and how this will be implemented will occur later. For these data classes, are there any specific considerations for implementation that we should add into the body of the recommendations? This could be related to adding additional elements into a repeating group, not knowing the number of values within potential value sets, or if the number of questions in a class changes the structure that seems most appropriate, but we are interested here in hearing any informatics considerations that would be good to add for particular structures or classes.

- Jacki Griffin: This loops back to consistency but the only thing that keeps coming back in my head, is one of the largest struggles we’ve had in implementing is default value and handling of “other.” When “other” is an option sometimes default value is other, sometimes other is a true answer. And if you choose other, you have to give additional elements. So default values and consistency really are big items for us.
 - Sam: ok, so when implementation comes in, be sure that the default value is defined
 - Jacki: yes
 - Sam: and then making sure it’s defined how to handle “other” so if there is another please specify value, how that should be transmitted
 - Jacki: yes, and we kind of struggled with that. That became a big deal for us when COVID hit with “other” and a couple of our variables.
 - Sam: and if you were to expect that, that would make it easier
 - Jacki: yes, if we knew to expect it, we wouldn’t have had any issues, we would have already coded for it
- Erin Kough: I have some follow-up questions for Tim. Is having a third level in this kind of repeating group any different than if you had multiple questions within a travel or hospitalization repeating group, for example? Is there a difference in those that these specific ones were a yes, no, other or yes, no, unknown paired with a question that’s in the value set?
 - Tim Liao: It seems like the 2 different repeating groups you posed, those seem like second level questions/second level repeating groups to me. Like it doesn’t depend on a previous response like a third level depends on the previous response.
 - Erin: So you’re saying for example, if it was exposure – raw milk (the first question), second question is “yes, no, unknown,” and third question is date. The third would be dependent on whether or not that second question was “yes”?
 - Tim: I think so
 - Erin: Ok that’s good to keep in mind
 - I was having trouble because with the second level, you can also have different substances. So the level also has to identify which substance it’s referring to so which third level question has to refer to specific second level response or substance in question
 - Erin: yeah, in this case, the idea is that there would be one repeating block with no necessary parent, that data class indicator wouldn’t necessarily be a parent. The repeating block would be questions that are paired through the sequence of the blocks. I’m wondering if it would be something like the third question would be a date for example but that would be left blank for anything except for yes, so it wouldn’t necessarily be a child of “yes”, it would just be an additional question that could remain blank. On the front end you might build it as only show this question if yes.

- Tim: I think Hannah in the chat, that makes sense. Her question is a pretty good question
- Chat
 - Tim Liao: it is difficult to code for levels of repeating groups. for example, 1st level is what type of substance used, 2nd level is whether you used substance or not, 3rd level is injection route. 1st and 2nd level is no problem but the 3rd level can pose a problem (especially in Rhapsody)
 - Hanna Chakoian: Parent, child, grandchild, vs parent and two child questions?

Poll 2 – Repeating Element Limit

- Again, this poll is for those informaticists who map data into case notification HL7 messages. For example, if you have mapped a clinical manifestation repeating group which included only the two white-filled rows and then a new or updated MMG added the pink row to that repeating group – would it be a large lift to add the additional piece of information to the HL7 message structure?
- Tim Liao: I was having trouble in Rhapsody for the lookup table and mapping that
 - Erin: so the idea is that within this group, the answer to that top row would be the clinical manifestation. So let's say, fever. The second would be "yes, no, unknown" for that fever. And the third would be the date, and those would all be separate OBXs but with the same OBX 4 connecting those three together, so that you don't actually have to have them specified anywhere in the question and they are automatically lumped together in the message.
- Teresa Schillo: I'm just double checking that I understand what the poll question is asking, it's not saying that if we already have it set up and we want to add a new element, that's not what you're asking. You're just saying in general if it's 2 elements versus 5 or are you asking if you've already got it set up and now you've got to add something new?
 - Sam: I think it's always going to be more complicated to add something new. The idea of adding that grandchild element is what we're talking about. Is that inherently more complicated than just the initial setup of the first 2?
- Lesliann Helmus: Are we talking about this clinical manifestations? That first question being like the independent question that just said "Are there any clinical manifestations?" I don't see that as being part of a parent-child relationship. I just see that as being a question.
 - Sam: that first row here is that value set with the list of all of the different clinical manifestations. So that first row would indicate this is the clinical manifestation of EM rash and then that second row indicates you would indicate yes or no to the em rash, and this third row would be the date that they had the rash
- Sara Johnston: is the question that you're trying to get at, "Is it prohibitively more difficult to add the other kind of conditional data element to the repeat?"
 - Sam: Yeah I think so
 - Misty Johnson: Thank you Sarah for asking that. I think I need to change my answer b/c anytime you're going to add something more, you've got to set up just 2 elements versus you've got to set up – maybe it's a lab repeating group – 5 or 6 elements. Obviously, it's more work so that was the way I answered it. But now I would answer, no, it's not prohibitive
- Sam responds to Amy's chat: I think you're saying, Amy, that the idea of the pink row should only be filled out if the second row is yes versus if you were able to transmit an EM rash, the answer is no, but you would transmit that date value anyway. And hopefully it's empty, but the date is independent of the answer to the second row – is that what you're talking about would be easier?

- Amy Lai: Yeah, so treating all the sub-questions on its own and not dependent, not having 3 levels or more than 3 levels. At least in Rhapsody it's easier to get it done. Right now we ran into this when there's the third level. What we end up doing is we hard-coded the first question, the first symptom question, but that's not ideal b/c when you hardcode stuff it's hard to make changes.
- Tim: I think also if the second level is just only yes, I'm only interested if they use a certain substance, but then I have trouble with the third level b/c I have to refer to which substance they're using and then also the pink level response for that. I guess the mapping gets a little difficult for that.
- Amy: My comment is that it's possible but it makes it very complicated and makes maintaining that code very hard. So preferably if we don't need to have this structure, preferably it will make pulling data into and sending it to CDC easier if we don't have this multiple layer question relationship
- Lesliann: so what I'm hearing is, let's be careful of how we structure the elements to not make them complicated, but if the alternative is multiple questions that's also pretty complicated, isn't it?
- Lesliann Helmus: I do think we need to think about what the alternative is, b/c if we're going to need a date that goes with that clinical manifestation, it may be a little more complicated to set this up. But is any other strategy going to be even more complicated to maintain, to update, to add to the package?
- Sara Johnston: That's a good point Leslie. I want to make sure I'm understanding the challenges. The challenge is more about determining when a data element should be sent versus not sent in Rhapsody? Is that the challenge? Like having the date added to the message versus kept out of the message in that particular repeat based on the previous data elements in the repeat, or is it one of them?
 - Tim Liao: from my standpoint, it would be ok. In Rhapsody you're making a lookup table, you have let's say 3 responses for yes, no, or unknown. But then you have to put in the variable names to which ones pertain to "yes, no, unknown." If my variable names have this substance in the variable, that makes it like 3 times let's say 5. So 15. And then I tried that and then I get all these iterations that just don't look great. Maybe I could find a solution if I spent more time on it, but I haven't had time to go back to it yet
 - Sara: Is there a preferred alternative as Lesliann is getting to, if you need to send dates with symptom onset for each symptom, does that then become a new repeating group? How do you send the dates for each symptom
 - Tim Liao: I don't think dates might be as hard b/c you could structure it sort of like a lab result right? You have like the day you have the specimen, the test type, those are all second level questions
- Chat
 - Amy Lai: I think if we treated those all as child's it's doable just grandchild structure would be hard especially in Rhapsody, as Tim mentioned above
 - Erin Kough: the idea here would definitely not to have question three be dependent on two.
 - Erin Kough: Not sure if this is helpful. This is what I would think it would look like in the message and this would repeat for each risk factor -- the third one has made up codes.

```
OBX|6|CWE|INV1117^Patient Epidemiological Risk Factors^2.16.840.1.114222.4.5.232^INV1117^Patient Epidemiological Risk Factors^L|1|328383001^Chronic liver disease^2.16.840.1.113883.6.96|||F
```

OBX|7|CWE|INV1118^Patient Epidemiological Risk Factors Indicator^2.16.840.1.114222.4.5.232^INV1118^Patient Epidemiological Risk Factors Indicator^L|1|UNK^Unknown^2.16.840.1.113883.5.1008|||||F

OBX|8|DT|ABCDE^Patient Epidemiological Risk Factor Date^2.16.840.1.114222.4.5.232^INV1118^Patient Epidemiological Risk Factors Date^L|1|8 March^8 March^2.16.840.1.113883.5.1008|||||F

- Poll question: Does the number of elements/question within a repeating block have any effect on the ease or complexity of mapping data classes into case notification messages?
- Options: Yes, more elements/questions make things more complicated | It doesn't have much effect on data transmission | I'm not sure
- **See results [here](#)**. Poll was launched 2 times
- Most people either selected "Yes, more elements/questions make things more complicated" or "I'm not sure"

Poll 3 – Repeating Value Set Limit

- Our final poll today is about how the number of data elements affects what structure is best. For instance, if there are only 3 exposures of interest, are individual data elements easier as a whole? And if there are more than 3, is it easiest to make it a repeating block/element? The exact number here might not be three, but is there some inflection point where after that a repeating element or block would be less complex to implement than individual questions?
- Chat
 - consistency please!
- Poll Question: Is there an inflection point in the number of repeated elements/questions that makes a difference in which structure is preferred?
- Options: Yes, there is an inflection point in the number of exposures/symptoms/risk factors/underlying conditions, after which it is always easier to have a repeating element/block | No, individual data elements are always less complex | No, repeating blocks/elements are always less complex | Consistency is best – no matter the number! | I'm unsure
- **See results [here](#)**
- 62% responded "Consistency is best – no matter the number!"

Next steps

- Upcoming DEST meetings
 - 4/12, 1-2 pm ET – Exposures, Risks, Underlying Conditions
 - 4/19, 1-2 pm ET – Signs, Symptoms, Clinical Manifestations
- The next full DSWG call will be on April 26, 2024.

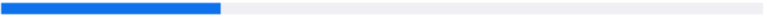
Polling Results

Poll 1 (n = 17)

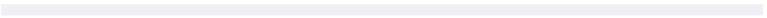
DSWG_3.15.24_Q1

1. Would presence of a data class indicator have any effect on the ease or complexity of mapping data classes into case notification messages? (Single Choice)

Yes, it would make transmission of these data classes easier. 29%



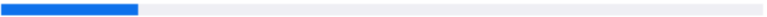
No, it would make transmission of these data classes more co... 0%



It doesn't have much effect on data transmission. 53%



I need to think about it more. 18%



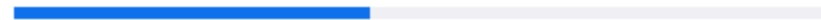
You did not answer this question

Poll 2 (n = 17)

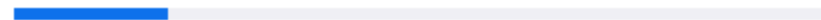
DSWG_3.15.24_Q2

1. Does the number of elements/question within a repeating block have any effect on the ease or complexity of mapping data classes into case notification messages? (Single Choice)

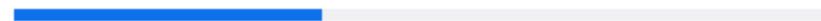
Yes, more elements/questions makes things more complicate... 44%



It doesn't have much effect on data transmission. 19%



I'm not sure. 38%

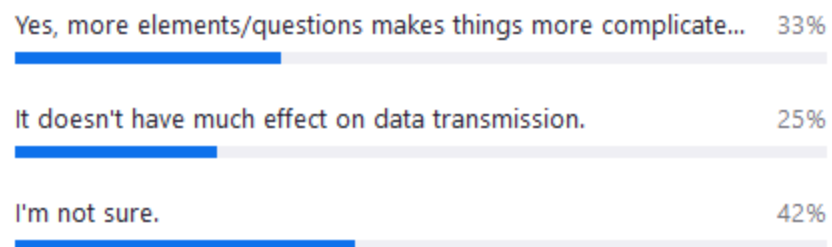


You did not answer this question

2nd launch (n = 17)

DSWG_3.15.24_Q2

1. Does the number of elements/question within a repeating block have any effect on the ease or complexity of mapping data classes into case notification messages? (Single Choice)



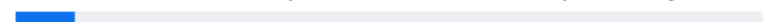
You did not answer this question

Poll 3 (n = 13)

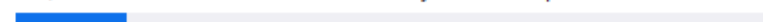
DSWG_3.15.24_Q3

1. Is there an inflection point in the number of repeated elements/questions that makes a difference in which structure is preferred? (Single Choice)

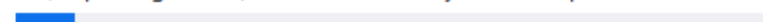
Yes, there is an inflection point in the number of exposures/sy... 8%



No, individual data elements are always less complex. 15%



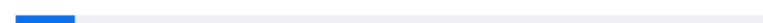
No, repeating blocks/elements are always less complex. 8%



Consistency is best - no matter the number! 62%



I'm unsure. 8%



You did not answer this question