MedMorph: Consolidated Use Case

June 18th, 2020

Agenda:

* Logistics and Recap from Last Week
* Maternal and Child Record Linkage project - discussion with Kate Woodworth and Sarah Schellie
* Working Session: Hepatitis C Use Case – User Stories, Flows, and Diagrams
* Next Steps

FOCUS OF THE CALL: [https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/694452251/Hepatitis+C+Use+Case+-+DRAFT](https://carradora.atlassian.net/wiki/spaces/MedMorph/pages/694452251/Hepatitis%2BC%2BUse%2BCase%2B-%2BDRAFT)

**Items in Bold Font = Action Items or things for further consideration**

Discussion:

* Disposition of Shaoman’s comments regarding when a test would be ordered – we want to keep the user story generic and not necessarily get into all the reasons a test would be orderd
	+ Shaoman – yes, I agree with the disposition
* Dr. Mullins – Well there is maybe some detail we might want regarding the HCV testing – maybe whyit was given as it may be given to someone who is asymptomatic, has symptoms or maybe a preventative test.
* Becky – right now that is not currently captured – right now we have the generic “patient is flagged” we don’t say why they are flagged – is this an important thing to highlight in the use case?
	+ Dr. Mullins – it is a recommendation
* Maria – generally the EHR needs something to flag – to Ryan’s point it could be some set of risk factors –
* Genny Luensman -- Might want to include why there was a flag – it would be good to have occupational data is reflected in MedMorph
* Sarah - In April CDC made recommendations for adults and all pregnant women to get Hep C testing
* Bill –it seems that if we say the trigger is the presence of the flag in the EHR that is a technical trigger – there is a technical way to think about this – a flag in the EHR starts a series of actions the second part is the CDS for the flag being set -it feels like there is a boundary there that may be outside of MedMorph since MedMoprh has not focused on being the activity/project that sets up the CDS – is this too narrow of a view? Should we be talking about the variety of CDS that might result in a MedMorph action of Hep C testing?
* Becky – Maria do you have input – in the other use cases we have been more general and have tried not to take a narrower vision, we could maybe go more detailed here – but if we get specific then we may need to look at the other use cases and it muddies what we are doing from the RA –we are looking for a trigger event
* Steve – I think we could abstract it – what is the relationship between MedMoprh logic and EHR logic – at what point is that happening what is the point that MedMorph looks into the EHR
* Maria – I do think it is useful in a user story of examples that would trigger – some examples may change something on the technical side – maybe demographics and risk factors as examples? – what kind of trigger is it – what we are learning in this process from the other cases so far is that there isn’t a technical difference there is some sort of predefined flag and that is the starting point and no matter what the flag the process starts at the flag across all user stories
	+ Steve – if it is a diagnosis flag or risk factor flag – MedMorph should look for those indicators but those indicators are not the triggers – we are not making setting changes in the EHR
* Ryan – what we want to understand – we can infer some things out of this – if I see a result or an order that produces the result there has to be a diagnosis – if it is preventative we don’t need to know CDS as there may be no CDS because it is part of a guideline that all people are screened because of guidelines vs. screening because of inference vs symptom based – you would want to at least know the diagnosis associated with the lab – it will tell you if it was done for preventative vs. symptom
* Brian – the trigger is “ordering the screening test” so it doesn’t matter how the test is ordered if every person is eligible – the screening itself if the trigger then it doesn’t matter
* Maria – if there is a test result it sends an eICR are there any reports on eligibility to get the test vs. someone who got the test (a count of who is eligible is the denominator to track those who get screened when they are supposed to)
	+ Aaron – no only positive results get reported through eICR or eLR reporting system – notifiable disease system -but regarding your question that is a area of focus for us – we are trying to close this gap – now everyone is eligible based on guidelines from April
* Maria – is there a difference in scenario of who is eligible vs. who is getting the test and who is positive – is there a difference on the technical side? The trigger would be what the eligibility criteria is – there is still a set of triggers – what am I missing on the technical side?
	+ Al – the question about denominator is valuable for system and practice performance to evaluate case – but if you measuring population care you need the denominator and all the pieces that go into it
* Maria – that is the reasoning for why we would do it – but would there be a difference in how it gets triggered if it is pop management, patient treatment, reporting – does it still just come down to a trigger?
	+ Shoaman – it depends if patient has had a test before or a previous diagnosis – based on universal testing recommendations it could be a candidate for the testing
* Maria – it boils down that there is some trigger
	+ Mike -yes from the point of view on the tech side there is a trigger – it isn’t know by MedMorph or the backend app the reason for the trigger
* Brian – in this case the trigger could be screening
* Maria – it is written for the test results
	+ Ryan – if test results only on a segment of a population of people who have symptoms
* Brian – if the trigger is the result then MedMorph springs into action to request data and sends it to public health –I think we are having issues like HCS – there are enumerable ambulatory visits that can be addressed but bottom line we will collect if a series of criteria is met – which is similar here – a trigger is evaluated for certain criteria – for Hep C if a positive result is the trigger then all the up-stream may not be relevant for what MedMorph does
* Ryan – if I have a patient that already has a known diagnosis but it is a new lab test – if we do another test – if MedMorph triggers on just a lab test order and passes it on, I as a physcian would want to know the diagnosis or reason for the test as jaundice, or preventive – if I am a consumer of the data – I want to know they already know this is a confirmatory test – vs. asymptomatic/guideline compliant test
	+ Brian – I think once it is triggered they would get the diagnosis – it is common for registries to have multiple reports to reconcile – I don’t think this is something in the MedMoprh scope – MedMorph gets data and sends it out – if that data is already reported then it is up to public health registry to disambiguate the results for that patient
* Maria – it could be a combination of a trigger and a rule
	+ Ryan – that sounds fair

Maternal Child Linkage

* Mom’s infection status does not always transfer to the pediatric provider – especially if moving to foster care
* Baby doesn’t always get tested when they are supposed to – there can always be movement during the first 18 months of a baby’s life and want to make sure it the Hep C exposure and/or testing information doesn’t’ get lost
* Becky – how does the linkage get done
	+ Pregnant women are tested during pregnancy – then infant records (once born and leave the hospital) are transferred to pediatrician generally there is a packet that goes to the hospital – it might not include the moms Hep C status – it may just be general information on the infant after birth
* Maria – so how does your project go about linking the records? Can you walk us through that?
	+ Kate – that is what we are trying to improve with the health department –There are a few ways it is done now
		- Linking through birth certificates contain information about infectious disease during pregnancy – they are using that
		- or when they get positive results through ELR if they identify that
		- and then live birth through birth certificate data
	+ They use a combination of these things and then may follow up with pediatrician using the birth information as it requires the baby to have a pediatrician listed prior to the baby leaving the hospital, if that doesn’t work we look at immunization records an follow up with the pediatrician doing the immunizations to request the pediatrician test for Hep C
* Maria: Should we consider this linkage in our user story or future of MedMorph –
* Kate – there are 2 linkages in Maternal and Child infection – is mom to baby but there is another on post-partum treatment – but making information linked to pre-partum and linking those to scenarios together to ensure pre-partum communicates with post- partum is also another step to consider
* Ryan – there is an inferred thing – if I see that an infant has a hospital code of “exposure to hepatitis” even then at a minimum there are some mechanisms that can help identify scenarios to re-test 18 months later – If I saw that an infant had exposure as a doctor I would inquire and get hospital records at a minimum but would be nice if it was automated
* Brian – I see this as out of scope for MedMorph – but a roadmap
	+ Kate – what does that mean exactly
		- Becky – we could still include the baby but we wouldn’t prescribe how the linkage is done – we would take the best case scenario that the infection status of the mom
* Aaron – the issue is that it is challenging to use this technology and strategy to link the mother and child pair – so if there is a positive test result – if mom is tested and positive testy result is available and if baby is tested and is positive then baby results would be reported but the linking of the two of them that is of scope
* Maria – if this is something in your roadmap – or if you have a use case we would like to know
* Ryan – one has described that has a condition vs. someone who is at risk
	+ Maria – yes I think so – if tested and positive they would be reported that fits our architecture but the question is in the case is there something we know about the mom that requires a follow up without a test that is positive or negative – if that happens how do we link the records so there is follow up?
* Dan – there are a number of scenarios that could use record linkage – we have been trying to get work done on this for awhile (ONC)
* Steve – this goes beyond just mother and child – I could inherit from Mother or father so being able to make parental linkage beyond maternal and child
* Dan – it gets complex – it becomes record linkage – the underlying constructs to do linkage could be straight forward and a base resource
* **Maria – Dan we will take a look – this could come up in research use cases – should include or at minimum build on this at a future time based on placing this in the roadmap**
* Ryan – this is timely as it relates to COVID as it is the same premise as contact tracing --linkage the clinician knows to order testing
	+ Steve – as a parking lot issue – there is a lot of potential for supporting some kind of ability to link record amongst patients – maternal, paternal, house-hold etc.
* Maria - Almost another public health use case which is contact tracing – we need to think through this – could we, should we or do we plan to work on it in a future phase? – **we will need to talk through this and work out more of the need and identify additional use cases – maybe it is just record linkage in general**
	+ Steve – yes start from abstract then focus on maternal child and what is the burden on the provider system
* Cindy – the vital records project is looking into this – using FHIR and creating FHIR IG for birth – still in beginning stages and still looking at specific resources and profile creations