Language Development Milestones and Parent Resources for Young Deaf/Hard of Hearing Children- Transcript for Sept 4, 2019 JCHC Meeting

Andrew Mitchell: Madam Chair and Members of the Commission, this is a study on Language Development Milestones and Parent Resources for Young Deaf/Hard of Hearing Children. The study mandate comes from Bill 1741 from last session introduced by Senator Edwards which focuses on language acquisition and development of children 0-5 years old. That bill was PBI'd in Senate Education and Health and sent to this commission for consideration. 2-3 newborns per 1000 experience hearing loss and are born each year experiencing hearing loss; that number doubling by kindergarten due to later on-set hearing loss. Hearing loss can range from mild to profound, from unilateral to bilateral and vast majority of children who are deaf or hard of hearing are born to hearing parents and there are some statistics there about how many are born each year in Virginia. Any degree of hearing loss raises risk of delay in language acquisition and literacy development. Hearing loss is historically had a number of adverse consequences on developmental outcomes, most deaf and hard of hearing children have historically arrived at kindergarten language delayed and there is often cited a statistic that the median reading ability of 12th graders is 4th grade level with only 10% achieving age-appropriate language skills. So when we talk about language it's a system of communication that may or may not have an auditory component. As an example American Sign Language is recognized as language that is distinct from English and for the most part visual. While the mode of American Sign Language is signing, there are several more modalities by which English can be expressed including spoken English and English with visual support. Research indicates that children can fully access any language whether it's signed or spoken achieve the same developmental milestones at the same rate and the same order and researchers also established that acquisition of any language is a necessary precursor to literacy in any language and broader child development and that acquiring language early on in life is key to all of these. Communication options range from mainly visual to mainly auditory and visual includes ASL and English in its written form and mainly auditory approaches involve oral/aural approaches what's more commonly known as listening and spoken language and there are other kind of communication modalities such as cued speech which is the use of visual supplements and spoken language and total communication which combines several different forms of communication. Until relatively recently in the advent of technology in newborn screening programs, there is only a small percentage of children who are deaf and hard of hearing who are successful in acquiring spoken language. Since the late 1990's improvements in these technologies such as cochlear implants which are surgically implanted and replicate sound or

improvements in hearing aids which amplify sound for those who have residual hearing have began to change this landscape. While the research is very clear on the importance of language acquisition it is not clear on which communication modes are optimal for language development or literacy and this is particularly true for the 90-95% of children who are born to hearing parents. So as I detailed in the appendix there is continued debate on which communication approaches are most likely to result in successful language acquisition and there are many factors beyond communication approach that play into that. So moving on to the system of services and supports for this population in Virginia this is a schematic of different agencies and programs really the 3 main components are first at the top the VDH's Early Hearing Detection and Intervention Program which has in its goals screening before the first month of age for all newborns, diagnosis before three months and getting children into early intervention services by six months. The second major component are the early intervention services which are developed through individualized family service plans or IFSP's. And then third major component, children diagnosed with hearing loss are eligible for early childhood special education services developed through educational programs primarily the Department of Education but also the Virginia School for Deaf and Blind and on the slide are a number of other programs and services by various agencies to help support this population. So Virginia like in most states at this point, all newborns receive an initial hearing screening however like in many other states there is a significant portion who fail initial screening but a definitive diagnosis remains unknown because of reasons of lost follow-up. Annually up to 300 children 0-3 years old are receiving early intervention services with hearing loss as an eligibility reason and annually around up to 300 children ages 2-5 receive early childhood special education services but because a diagnosis of hearing loss does not automatically qualify a child for early childhood special education services and due to the fact that the early intervention data system is somewhat antiquated and can't provide information on how many transition the percentage of children who are receiving early intervention and then transition onto special education services remains unknown. So what's currently known about language development and literacy for this population here in Virginia, data reported federally related to early intervention and early childhood special education services can't really address that question directly. What DBHDS and Department of Education do report are these three broad childhood development outcomes this is part of the federal reporting requirements for the individuals with disabilities education act or IDEA. The middle or second indicator acquisition and use of knowledge and skills relates to language acquisition but it is not a direct measure of it per se. So because of this we really have no direct measure at this point for this population. Now having said that what we do have for a little bit of older children beginning in 3rd grade for

grade school children there is information on English, reading and writing and literacy so that does provide some insights into language acquisition at stages and ages a little bit older than the population we are focused on. And this indicates a couple of things, first children with any disability lag in terms of passing literacy rates compared to those who do not have any disabilities. Secondly, those who have a hearing impairment as their primary disability category track pretty closely to those with any disability. So the next series of slides steps through the bill and some considerations that came up. Just to briefly touch on what this bill focuses on there are four major components; first is developing a parent resource that includes milestones in ASL and English as well as other information for programs and services for parents and that is to be developed with the input of the stakeholder advisory committee; the second component is developing an educator resource which is selecting actual instruments or tools by which to assess language acquisition and literacy, that also should be informed by the stakeholder committee; third is the integration of language milestones tracking into the IFSP and IEP processes; and fourth is a production of a report of language and literacy outcomes of deaf and hard of hearing children based on these milestones. And throughout DBHDS is identified as implementing agency coordinating with the Department of Education and the Department for the Deaf and Hard of Hearing. So just a word on this study as part of this we convened a stakeholder workgroup with wide ranging participation with agencies and advocacy organizations as well as parents and others of deaf and hard of hearing children. There were a couple points of general consensus which are primarily philosophical in nature that early language acquisition is critical for full language and cognitive development including literacy and that parents should be able to choose their preferred communication languages and modes. The points of continued disagreement were pretty much everything to do with the bill and there wasn't any kind of consensus on that piece. There are several terms used in this bill that merit explicit definition there are a couple of examples provided here, some can have multiple meanings in different context, other terms that are commonly used with deaf and hard of hearing person such as the communication modality listening and spoken language has some industry(?) meanings because of this my first recommendation and it's a basic one, is that if the JCHC considers legislation similar in intent to this bill is to simply define the key terms; I think it's especially important given the subject matter here. As I go through there will be a number of slides with these recommendations, these should not be interpreted as workgroup consensus recommendation's, they're my recommendations based on the input that I heard and I received as well as on my research. Secondly the bill identifies DBHDS as the implementing agency but there may be reasons why it may not be in the best position to serve as the lead agency, its programing is focused on disabilities

broadly and not on hearing loss per se and its program is limited to children 0-3 years old. There are two agencies whose missions do relate more directly this population. The Department for the Deaf and Hard of Hearing's mission is to promote accessible communication to deaf and hard of hearing persons although it is not focused on children per se. And the Virginia School for the Deaf and Blind even though it is not mentioned in this bill, its mission is to provide education for deaf and hard of hearing persons 0-21 years old. Giving that the bill calls for compiling language development milestones and assessment instruments for young children I would recommend the STB as the implementing agency coordinating with DBHDS, VDDH and DBLE to implement the legislation provisions if the JCHC were to consider similar legislation and for your reference I asked DSDB to come up with an estimate if they were to implement this what would the projected fiscal impact be, compared to what DBHDS estimated when the bill was introduced. The bill requires the development of a parent resource that contains both language development milestones and information about ASL and English and available programs and resources. The milestones and language development assessments; So this bill requires the selection of language development milestones drawn from standardized norms. Frankly it's a little unclear what the criteria means from my research it's mixing a couple of different aspects from language evaluation; and as importantly as the technical details. If this were to take the approach of mandating milestones based on norm referenced instruments which is what I think the bill is intending, it's not entirely clear what that would gain in the sense that if milestones were drawn from various norm referenced tools, state specific ones, the milestones that would result would not in themselves be norm referenced, they would not have been tested on any other population and there would be no norms to draw upon. So as I said it's not really entirely clear what is gained by requiring that they be based on norm referenced instruments and additionally there are many instruments already used by providers and educators to assess language development that are not norm referenced or standardized and there is a similar bill in Louisiana focused on the same issues and it was their particular task force recommendation to use instruments that was not norm referenced or standardized. So because of all this my recommendation is if there is legislation similar to this bill that is considered is to modify the basis for milestone selection away from necessarily being norm referenced but require that it be appropriate and technically sound or some sort of verbiage to provide flexibility to the implementing agency to draw appropriate milestones and if this is coupled with the recommendation of the STB being the implementing agency one can hope they have the expertise to do so. Now we're on to the parent resource. So there is a parent resource that is required this provides some information. Currently there are already two parent resources that produced supported by VDH and the Department

of Education and produced by VCU and they speak to many of the provisions in this bill. They provide information on hearing and hearing loss, on communication approaches, on the IFSP and IEP processes. So the green guide, they both provide this kind of information, the green guide is provided to parents as soon as a child 0-3 is diagnosed with hearing loss and the orange guide provides additional information relating to the school age set. Now crucially it does not include information on language milestones because at the time that this was written that was not really as subject of discussion but it is expected to begin its revision process beginning next year; so my recommendation would be if legislation like SB 1741 were considered, is to use the existing resources as a basis for the parent resource. The bill requires information of the advisory committee and provides both the size and very very specific qualifications about what individuals the skills they're supposed to bring to the table. Legislating the precise committee size and composition does risk omitting relevant perspectives; there are 16 different combinations of language and modalities that are recognized by the Department of Education as languages means of instruction and many different perspectives and given this, this approach really risks excluding people who may be knowledgeable and have various perspectives as well as say candidates who have multiple qualifications and can serve more than one role on the advisory committee. I believe that Virginia has an opportunity to learn from similar legislature in other states which has really evolved to allowing their implementing agencies to play more of a role in determining the specifics about the advisory committee such as in Indiana where really the sole criterion is that their implementing agency ensure that the membership of the advisory committee includes a balanced representation of deaf or hard of hearing perspectives. Additionally, there are really two different tasks of the advisory committee; one is to make recommendations on milestones and one is to compile information on available programs and services. And so it is my recommendation that if this legislation such as SB 1741 is considered, that it both authorize the implementing agency to have a bit more say in the shape of the advisory committee but stipulating minimum criteria to achieve balanced representation and that the roles of the advisory committee members be linked to their expertise more explicitly.

So in terms of how the language milestones are linked to the IFSP and IEP processes some of the bill's provisions are already captured in federal law such as that which already permits parents to bring resources to those meetings which could presumably include observations from milestones that they could do at this time without legislation. Having said that a finding that emerged from the workgroup meetings that many parents are actually not aware of the array of language development milestone instruments particularly for ASL. Perhaps the biggest consideration here is that linking milestone assessments to these requiring

milestone assessments would be a fundamental shift in how DBHDS and the Department of Education their guidance to the local teams and that would require regulatory changes. Cause at the moment neither agency requires their local early intervention system or their local education agency to use a specific set of assessment tools. And in addition to any regulatory changes that would be required, annual language milestones assessments could and I do emphasize could incur additional provider time and cost; I can't say if they would or wouldn't but there is a possibility if they added more time to what providers are already doing when they're assessing that could incur cost and as well as cost to use tools that are proprietary in nature and have some degree of cost associated with them. There isn't a whole lot of information on this front; one point of reference that I do have from Kansas implementing a similar bill would dedicate its staff there so they take a slightly different approach but they have dedicated a staff conducting language assessments annually for 250 children and their budget is around \$465,000; not sure that it would be the same amount here but there are cost potentially associated with this approach. So finally to wrap up with this bill the language development milestones report, first it would provide information on a subset of all deaf and hard of hearing children in Virginia mainly those who are receiving IDEA based accommodations and services. It wouldn't capture those who have received early intervention and then aren't receiving early childhood special education services as an example, or those receiving accommodations through section 504 plans or those simply not receiving any kind of accommodations at all. Secondly it is the data collection would incur agency costs. DBHDS can't weigh in on that because they're in the process of procuring a new early intervention data system, the Department of Education estimates a fiscal impact of \$95,000 in the first year and then around \$45,000 thereafter. Thirdly, the data collected would lack a basis of comparison in Virginia primarily because language development outcomes are not collected for any other children any other subpopulations; having said that it could be a means to track among this population language development over time. And finally submit that collecting data on characteristics of children assessed, additional data, could more directly inform agency programing for example if there were gaps or disparities in milestone achievement by geographic region or communication approach that kind of information could inform programming; my recommendations align with that, saying if this approach was taken that the implementing agency should determine which additional characteristics of children assessed to be collected and reported on for this report. Before going to the recommendations and policy options there are a few slides on what might be some alternative approaches to SB 1741 that are aligned with the goal of language acquisition for this population. The first is to simply build on the existing informational resources. I've already referenced the green and orange guides that

are produced this doesn't necessarily require new legislation to request with the agencies to incorporate milestones into or alongside current and future versions and the second has to do with information provided by various state agencies directly involved with this population; there were multiple workgroup participants that highlighted the difficulty in knowing where to go to where to access information when diagnosis was first received and as you saw before the system is pretty complicated and there are a lot of agencies with a lot of different programs so an improved public understanding of the roles of state agencies involved with this population and families could be beneficial and my recommendation tracks to that. Secondly I would recommend using existing literacy data to track language development outcomes. Now first literacy may be considered a kind of downstream outcome or proxy indicator for language acquisition in the sense that one cannot be literate without having acquired language and it has the advantage of written English it is a form of communication shared by all deaf and hard of hearing persons and children and it can be tracked in a relatively straightforward way. Currently the Department of Education does track literacy development of children in public schools through two means; one is the phonological awareness literacy screening or PALS beginning in pre-k up to the third grade level and the second is the standards of learning literacy assessments and I showed you a slide earlier on those literacy assessments. On a slight note I had expected to be able to present similar data for the PALS, on reasons that aren't entirely clear to me the Department of Education wasn't able to provide that data for me in time for this report but I'm gonna continue to work with them because it does relate to this population 0-5 and hopefully I will be able to sometime after the fact provide something similar on the achievement for those with hearing impairment as a disability compared to others for your information and so you have a complete picture of what we already know in terms literacy among this population. So given that there are already some literacy measures out there, I believe there is an opportunity to use existing inter-agencies data systems to longitudinally track literacy results for children with hearing loss. So the Virginia longitudinal data system or VLDS currently links 6 participating agencies including the Department of Education. They already have their PALS and SOL literacy tests results on boarded into that. Right now VDH is currently in the process of on boarding its early hearing detection and intervention data and this provides an opportunity going forward to link any child with diagnosed with hearing loss with their outcomes later on in life and this is like I said using existing systems and existing data so my recommendation is to use that as basis for reporting on literacy outcomes for this population. Because hearing loss is a low incident condition there are many barriers to accessing services at each touch point from screening, from providers being hesitant to providing bad results failed results or

downplaying them, at diagnosis there are literally a handful or even fewer Board Certified Pediatric Audiologists in this state and a limited number of early intervention or early childhood special education providers in term of services that might understand the needs of this population. So there are opportunities to build on from what is already existing for early intervention, right now DBHDS maintains a list of teachers that the deaf and hard of hearing that they recommend should the local systems need services provided for this population; however their geographic placement is such that even though the Department believes there is enough coverage in the state to address those needs, there are geographic barriers for children to access them. DBHDS has been seeking DMAS approval to cover early intervention services as a telehealth delivered reimbursable service however recently DMAS memo that clarified its existing telehealth policy does not address including new or changed coverage so early intervention continues not to be a service covered by tele-practice. In terms of early childhood and special education there is a network of consultants or VNOC available to local agencies which could be built upon. And finally, in terms of exploring opportunities for early exposure of families to deaf role models, because it's a low incidence condition and things we heard from the parents it can be really difficult to meet people with lived experience and understand what the trajectory of parents what the trajectory of their child might be. And the potential positive impact of the increased exposure of families to deaf and hard of hearing adults. This has been recognized nationally through the Joint Commission on Infant Hearing. HERSA has a federally supported grant to increase the role that deaf and hard of hearing adults play in early intervention and any programs however here in Virginia there is no such program and multiple workgroup parents as I said indicated there are difficulties in making contact with deaf and hard of hearing persons. So across the US states support a variety of programs that are aimed at increasing the involvement of deaf and hard of hearing adults in the early intervention with the intent of improving family engagement with the system and the children's language development in particular the deaf mentor program described here; it does emphasize instruction in ASL and exposure to deaf culture although some states such as New Mexico has taken an approach where it is more comprehensive than just instruction in ASL and is in fact a covered service by their Medicaid agency as a developmental service and so even here in Virginia, the Virginia Board for People with Disabilities recommended addressing work force area shortages and they called out deaf mentors. There is a limited body of research on deaf mentors and their outcomes, it is suggested that there are potential benefits for mentoring programs for language development and self-advocacy although I do emphasize there is a very limited body of knowledge that we have on that.

So finally the policy options. First is to take no action. The second is to introduce legislation and a budget amendment based on SB 1741 with the modifications listed here which are essentially what I went through in the report to define terms, to change the implementing agency to VSDB, to change how the advisory committee is constituted, to not create a new parent resource but base it on an existing one, to change the basis of milestones away from standardized norms allow some flexibility and finally to require that milestone data collection have additional characteristics collected of those children assessed. The remaining policy options, they kind of track with my recommendations that I provided when discussing alternative approaches to Senate Bill 1741. So this option has to do with using VLDS as a way to link together existing literacy and hearing loss data, essentially requesting that the Department of Education use that to conduct an analysis and linking it with any hearing loss data and submit a report by next year. Policy option 4 has to do with building on the currently published resource guides as a basis to include information on milestones; this is basically a non-legislative approach to request that milestone information be wrapped into those guides here now and in the future. Policy option 5 has to do with ensuring that parents can easily know how to access information and it's requesting that the various agencies come together those that provide services and have information on this population to make sure that their messaging is consistent regardless of what specific are they are focused on. Policy option number 6 has to do with using tele-practice to expand access to the services of early intervention providers who are experienced with hearing loss and this is requiring that DMAS work with DBHDS to provide Medicaid reimbursement for early intervention services delivered by tele-practice, and as part of that have a report indicating what kind of timeline is possible and whether there would be any required legislature funding or any other changes to make that happen. And the last policy option has to do with exploring programs that integrate deaf and hard of hearing adults into early intervention services and this would be a budget amendment requiring the Department of Deaf and Hard of Hearing in consultation with the various agencies listed there to explore opportunities to develop programs connecting families of deaf and hard of hearing children with deaf and hard of hearing adults including mentoring programs; really with the goal of increasing the uptake of early intervention services by families and providing assistance to families in sign and non-sign based communication; and again a written report due to the JCHC in a year's time indicating how to make that happen. And that ends my presentation.

Senator Dance: Thank you. And now for Del Garret (on the phone) do you have any questions or comments?

Delegate Garrett: I don't Madam Chair, thank you.

Senator Dance: Taking a roll call of who is on the phone line and Senator Dunnavant and Senator Sturtevant were on the line. Senator Dunnavant commented on not having the presentation in front of her and after reviewing it will comment on it later on.

Senator Edwards: I have a big-picture question here. Can you capsulize the two positions in some way in English language that's simple language that one group wants to do one thing the other group wants to do another thing, there is a lot of differences here. Can you capsulize the differences?

Andrew Mitchell: Sure I'll refer back to stakeholder input it's the points of continued disagreement the first one let's skip over the definition of language versus communication modality I think some of the bigger picture ones are do we really need additional group to come together that would incur some sort of cost to do so to have additional information on what's out there, this parent resource, when there already is information and lots of programs and services

Senator Edwards: To put that in the category of do we really need this? **Andrew Mitchell:** That I think was a point of discussion. Probably one of the bigger points was data collection: what would that achieve? Right now there are a few direct measures of language development but the question is by collecting data on language development and having a data point: this many children achieved----let's say milestones were put together; this percentage of children achieved their milestones or not, what would that do for us? would that help services in any way? would that inform programming? what could we do with that information? is that really worth it? Some people would say yes very much so and some people would be hesitant

Senator Edwards: Is that in the category of expense?

Andrew Mitchell: I don't think just expense but also to what end? Meaning what is this going to allow the state to do better

Senator Edwards: This kind of goes back to the first category of do we really need this?

Andrew Mitchell: Yeah I think in many ways. And again there are some that feel very strongly that yes it is needed and some that feel very strongly that it isn't and many in between

Senator Edwards: Okay anything else? Those are the two categories. Is it that the second category of people who say we don't really need it, it's too expensive and so forth, they're satisfied with what they're getting at the private sector?

Andrew Mitchell: That's what I think maybe some of the disagreement is, is this where efforts needs to be focused? That if many people acknowledge there are gaps in the system that it's difficult for this population to access services or be successful in acquiring language, should our efforts as a Commonwealth, public

and private be focused on improving that system or on collecting data related to language milestones?

Senator Edwards: The system, should we just leave it the way it is, private sector system in fact versus the state...

Andrew Mitchell: It relies on private sector provides, I'm sure there is a mix. Depends on how know...if you're working with the Chesterfield County as a local early education provider, I'm not sure if it's private sector or public sector but it is a mix

Senator Edwards: If the people in the first category want the state to do something, any recommendation that people say in the private sector who are happy with the way things are, is there any requirement for those who are happy with the way things are that are gonna be disrupted with the state were to be involved?

Andrew Mitchell: You mean if this bill were to pass? (Sen Edwards: yes) I think to the extent that it would require a change in practice, there may be downstream consequences that, if I'm understanding the questions correctly, right now through an individualized family service plan or through an individualized education program, if one is receiving services, how those services are provided and the types of services depends very much on what that team with parents and provides have decided is appropriate for that child. If then a new system were as part of this now there is a standardized way of assessing language development that could impact the time they have to devote to those services as opposed to measuring **Senator Edwards:** Could there be an opt-in or opt-out part of this system if they

bill passes? I mean parents could say I'm not gonna participate

Andrew Mitchell: Opt in for the providers? (Sen Edwards: for the parents) I think they currently can. My understanding is that currently, maybe if I can turn to my Department of Education and Department of Behavioral Health and

Developmental Services colleagues, but if a parent wants to bring in, there are some milestones out there. California has a checklist, Kansas has some milestones out there, they're state specific, my understanding is a parent can come in with that information to an IFSP meeting or IEP meeting and say I want this to be an input for that process and the team would have to consider it. Now what the team does with that information is on a case by case basis. So in a way I think there already is an opt-in, opt-out kind of system it's just that maybe many parents aren't aware of different milestones for different communication modes

Senator Edwards: Is there a way to have the two groups to come together with something they both are happy with?

Andrew Mitchell: It was not clear to me from the process of the past several months of what that would look like

Senator Dance: I think we're getting a drilling here so could you... we do have another presentation so if there is some more questions that you would like to have or something else that you would require from our presenter here so that might be something that we can work out because I don't think you're getting to where you want to be with this one so... and it looks like Senator Barker wanted to ask a question or comment as well

Senator Barker: Yes a question. Make sure I'm understanding at least a part of this in terms of the process and who does what. It appears to me based on the data that you're providing, that roughly 250 newborns per year that are deaf or hard of hearing and it increases to about 600 per year by the time they reach kindergarten, and it appears as though that given the number that are in the early intervention program which is birth to 3 versus the numbers that are in the Department of Education program, which the early intervention is as seen through the CSB's, that about a quarter to a third of those are served in those programs and a majority are not served in those programs so they're either receiving something outside of that maybe in the private sector or nothing at all in those situations; is that an accurate assessment of things and then my major question following up on that is you're recommending in option 2 of having the Virginia School for the Deaf and the Blind have a primary implementation responsibility and how does that fit with what the CSB's are doing in the early intervention program and the Department of Education is doing basically for the 3 and 4 year olds

Andrew Mitchell: Certainly in terms of the numbers I think one could make some, I hadn't made the calculation, but one can make some estimates about what percentage based on national data what percentage of those formally receiving services are compared to the whole population. I would certainly be happy go back and do the numbers myself and see if I'm getting the same kind of numbers you are. The second question; really the implementing agency here is not to implement services but it's to come up with a product, a parent resource and an educator resource but this would not be that the Virginia School for the Deaf and Blind would now be providing or doing what DBHDS already does; it would not be that they are doing what the Department of Education already does with their local education agencies; they are just coming up with here are the milestones, they would convene a process to develop milestones for the state, and also say here are the specific tools that are need to be used in order to assess those milestones. So they would by implementing agency it's really the provisions of the bill are not don't relate directly to services provided because that's covered under IDEA funding it's really the framework under which those services are provided as it relates to language acquisition.

Senator Barker: One quick follow-up...Under the ?? if they are the implementing agency, would then the CSB's and Department of Education and

local school boards be responsible for complying with whatever the School of the Deaf and the Blind...

Andrew Mitchell: Exactly. I mean the way it is currently written whatever DBHD comes up with, the CSB's and the local school boards would have to comply with that, the only difference is whatever the VSDB comes up with those other agencies would have to comply with. But VSDB itself would not be taking over any kind of role in the actual assessments. That would be still with local early intervention systems and local education agencies

Senator Barker: Well alright, we'll have to consider that I guess. Thank you **Senator Dance:** Ok, so this is not over until we get some feedback; there will be opportunities for some public comments on the recommendations as we have them right now so I will thank you for the awesome task you had for trying to provide that information and now we'll move on to the last presentation