

**AN ACT reestablishing the commission to study environmentally-triggered chronic illness.**

**SB 85, Chapter 229:2, Laws of 2019**

**Regular Meeting (Remote via Zoom) of the  
New Hampshire SB85**

**Commission to Study Environmentally-Triggered Chronic Illness**

January 15, 2021 12-2 PM Remote mtg. via Zoom

Available via NH Senate Livestream on YouTube @  
<https://www.youtube.com/watch?v=qJVaeoIkRjU>

-Meeting opened @ 12 Noon by SB85 Commission Chair, Sen. Tom Sherman, District 24 who welcomed the panel and public prior to reading the "Right to Know Law" compliance statement

-Call to Order/ Roll call (Sen. Sherman) \*10 present/ \*4 absent (\*updated later)

Sen. Tom Sherman (Chair)- present/ home in Rye, NH/ alone in room

Rep. Jeff Salloway- present/ home office in Lee, NH/ alone in room

Rep. Gary Woods- present/ home in Bow, NH/ alone in room

Sen. Jeb Bradley- absent

Rep. Bill Nelson- \* absent (only initially)

Rep. Charles McMahon- absent

Katie Bush, Ph.D., NH DHHS, DPH- present/ Concord, NH office/alone in rm.

Mike Wimsatt, NH DES, Dir. Waste Management Division- present/ home in Concord, NH/ alone in room

Amy Costello, MPH, Dir. Center Health Analytics, UNH-present/ home in Dover, NH/ alone in room

Dan Tzizik, MPAS, PA-C, Concord Hospital; Associate Director of Didactic Education for the Physician Assistant Program, BU- absent (*d/t military commitment*)

Robert "Abe" Timmons, DO, MPH, FACEOM, Medical Director, Center for Occupational & Employee Health, Exeter Health Resources; Chair, Department of Occupational & Environmental Medicine, Dartmouth-Hitchcock Nashua- present/ Exeter, NH office/ one co-worker in room

Margaret DiTulio, APRN, MS, MBA- present/ home office in Jackson, NH/ alone in room

Hon. Mindi Messmer- present/ home office in Rye, NH/ alone in room

Hon. Nancy Murphy (Clerk)- present/ home in Merrimack/ alone in room

-Sen. Sherman/ Begins to review meeting agenda [Presentation by **Director Dave Wieters**, Information Services Department, NH Department of Health & Human Services; **Director Andrew Chalsma**, Analytics Department, NH Department of Health and Human Services; **Bureau Chief Chiahui Chawla**, MS, MA, Bureau of Public Health Statistics and Informatics, NH Department of Health and Human Services, Division of Public Health Services]- then stops to address approval of prior meeting notes-

-Sen. Sherman/ Calls for a motion to approve minutes from last meeting, 12/8/20

-Rep. Salloway / Motion to approve 12/8/20 meeting minutes

-Rep. Woods/ Seconds Rep. Salloway's motion to approve

-Sen. Sherman/ Any discussion on 12/8/20 minutes?

-Rep. Woods/ (referencing 20 pages of 12/8/20 notes) "Took me four hours to read them!" (laughter all around)

-Hon. Messmer/ Thanks Hon. Murphy for very detailed notes

-Sen. Sherman (and group)/ "Thank you, Nancy"

-Sen Sherman- Corrections? Comments? Seeing none...

-Sen. Sherman/ Calls the roll to accept 12/8/20 meeting minutes: \*10 yea/ 0 nay (\*updated later)

Sen. Sherman- yes  
Rep. Salloway- yes  
Rep. Woods- yes  
Hon. Murphy- yes  
Dr. Bush- yes  
Mr. Wimsatt- yes  
Ms. Costello- yes  
Dr. Timmons- yes  
Ms. DiTulio- yes  
Hon. Messmer- yes

@ 12:07:48 PM Rep. Bill Nelson is noted to be on the call as an attendee rather than panelist; Senate Admin. Services assists to change his status.

Rep. Nelson- \*present/ Brookfield, NH/ alone

Rep. Nelson- votes \*yes to accept 12/8/20 meeting notes

Roll call for attendance is now \*11 present/ \*3 absent

Roll call to accept 12/8/20 minutes is now \*11 yea/ 0 nay

-Sen. Sherman/ asks Dr. Bush (as DHHS representative) to introduce our guests

-Dr. Bush/ Welcomes two guests from DHHS and thanks Ms. Costello for inviting these presenters through her network of interactions at UNH. Informs the group that David Wieters, Director of the Information Services Department at NH DHHS, and Chiahui Chawla, Chief of the Bureau of Public Health Statistics and Informatics for NH DHHS, DPHS will talk about "a new Enterprise Business Intelligence (EBI) system that will be a new data warehouse and data dissemination platform for DHHS." This "aligns with the goals of this commission- to integrate data, and make it available for decision making." Thanks both for their presence and willingness to share their presentation. There will be a presentation then time allotted for questions.

-Ms. Horgan, NH Senate Admin Services/ Adds that Andrew Chalsma, NH DHHS is also present as a panelist to present to the group

-Dr. Bush/ "Great! Wasn't sure whether he was presenting as well... Andrew Chalsma (Director) of the NH DHHS Analytics (Medicaid Program) Department is joining us as well."

-David Wieters/ Thanks Dr. Bush for her introduction. States his NH DHHS affiliation and that he, "along with Andrew Chalsma and Chiahui Chawla", are like the "fearsome three trying to move data analytics forward for the department." Thanks commission for inviting him to speak re: data analytics and the EBI platform. Shares his screen to begin sharing slides for his presentation...

\* See Mr. Wieters' DHHS slide-show link:

<https://drive.google.com/file/d/1EBPTJW0JrqxOghYEmmrVww-Q29eDj5yX/view>

*What is EBI?* "A scalable enterprise data analytics platform that serves as DHHS' comprehensive data repository for multiple systems." Has some public facing analytics (COVID-19 pandemic response analytics; WISDOM data for different public health initiatives). Uses "Oracle" as the database; "informatica" as the tool to move data from multiple data sources/systems into DHHS' database environment; and "tableau" to present it internally to DHHS as well as for public facing for citizens. EBI allows DHHS "to do analytic trend analysis as well as some predictive analytics" and "really robust visualizations."

*Goals of EBI?* Provide a consolidated platform for all DHHS Bureau's to use for enterprise reporting, analytics and visualizations. To take DHHS data and provide info to employees, clients, providers and citizens. To create a user-friendly environment to enable people to understand and create useful information. To drive decision-making through a better understanding of data across programs and services.

*What are the EBI Data Sources?* Mr. Wieters shared that DHHS has integrated many data sources (too numerous to list here but includes such things as Vital records; Children, Youth and Family Referrals and Assessments; Child care Licensing and Registry Information; Vaccine Administration System; Hospital Discharge Data; COVID-19 Tracing/Investigation/Monitoring and Testing; NH Population/Census Info; Medicaid Eligibility, Managed Care Enrollment and Claims, etc.), and plans to include additional data sets.

-Sen. Sherman/ asks, "Is the vaccine registration system part of the new registry or will it be incorporated into this?"

-Mr. Wieters/ "The new registry, which DHHS is calling the NH Immunization Information System (NH IIS), will be incorporated into this." It just recently went live (soft) on 12/7/20. DHHS is working with the hospitals to go live, tentatively, in April 2021. "At that point, DHHS will ingest that data into the EBI to build more robust data analytics. This follows very specific legislation so there are data governance and management rules that go into place to ensure that data is not shared beyond the scope of what is allowed. This requires some extra effort when it comes to sensitive systems like the NH IIS."

-Sen. Sherman/ Thanks Mr. Wieters for his answer and calls for any other questions. Seeing none...

-Mr. Wieters/ Shares next slides...

*EBI Dashboards:* DHHS has several different internal and external dashboards to present the data in a user-friendly manner. [These dashboards include such things as Developmental Services Waitlist; DCYF Substance Misuse Related Allegations; ED Syndromic Surveillance Trends; ED Patient Migration; Custom Medicaid/Commercial Health Claims Diagnostic and Service Event Trends; and others.] DHHS employees leverage the data to make decisions on their programs and how they can further enhance services to citizens. Also, it makes public-facing data dashboards, as in the case for COVID-19 data, easy to consume and understand (informs: where the cases are presenting, where community transmission is going, where the vaccine is available and how to register).

*Dashboard Architecture:* A high level architecture base designed with two major environments; one non-public, the other, public.

*Non-public environment:* Intended for DHHS, interdepartmental, and other entities (e.g. providers, universities, etc.) in compliance with all laws to use for data analytics, reports, dashboards and integration of various data sources into a data warehouse allowing for better understanding of data, the services being offered and the outcomes of those services.

*Public Environment:* Housed in the cloud. Intended to be shared with the public via the web and provide insight to the issues, services and outcomes of the services. The data presented to the public will be in aggregate

ensuring the security and privacy of the data. (Examples: COVID Response Dashboards; Social Determinants of Health Dashboards, etc.) The plan is to expand to include some Opioid Crisis Response Dashboards as well.

-Rep. Woods/ Asks if the decision-making process re: data garnered in EBI "is made by humans/in-person and if neural networking can be used to garner more information."

-Mr. Wieters/ Though he would "never say never", the challenges for neural networks are "funding and time". The current EBI focus is automation of the data source transformation into the environment. The next step is the machine learning, or the neural network type processing, where based off a trend analysis and understanding, and predictive analytics, you take that to the next level- saying that now that we know how our data works, we build algorithms to represent that and do it for us. "Though this would be a logical 'next' step, first DHHS must get all of the data and relate it first into our environment, so we really understand how to model it and how it relates."

-Rep. Woods/ Excited for that "next step" because "the wealth of applicable information is in that next step." "Once you can get beyond the in-person decision-making and get some help from neural nets and machine learning, the outcome is mind-boggling." Thanks Mr. Wieters.

-Sen. Sherman/ Has a question... "Is it possible for a member of the legislature/this commission/or other statutory committee to ask a question of this system, whereby you feed that query into your database, and you pull from multiple sources in one query?"

-Mr. Wieters/ Thanks Sen. Sherman for asking and shares that Mr. Chalsma or Ms. Chawla might better answer this question. Right now "DHHS is in the infancy stages of bringing all the data sources together." Building a type of question/response or that "what if?" scenario is "part of that machine learning next step type process of being able to put that in."

-Mr. Chalsma/ "We're kind of in- 'infancy' is a good way to put it." DHHS is always open for information requests and prides itself in getting information out when requested- whether that's data that's in this system or in other systems. EBI makes it easier to serve up information. As policy needs change and evolve, that's where you need to develop more public dashboards to meet a particular need and we have the tools now and kind of capacity, assuming there's a person or funding there, to make something happen- like surface emerging issues like DHHS has been doing with COVID.

-Mr. Wieters/ Listening to the questions raised here helps him to recognize what is important info to legislators and citizens- and frames what DHHS should be working on next- how to automate or build those solutions to quickly respond to these requests. Agrees with Mr. Chalsma that even if the system wasn't able to answer it, DHHS would find a way to try to get that information out of the other systems.

-Ms. Chawla/ We have the public data portal and most of the indicators meet DHHS or DPHS programs business needs. Works with the public to identify needs and then takes it back to work with internal programs to generate/ produce some data visualization and present it on the data portal, without breaking the privacy rule, so the public can see what the programs are working on.

-Mr. Wieters/ shares next slide...

*Process:* (people ask what the process is and why it takes so long to get data in)

*.Identify the Goal* (what are we trying to present?)

.Data source (Identify the data source we're looking at for the info needed. Some data sources help provide a better response than others and they may be housed in other departments)

.Legislative Components (Sometimes legislation may make it more difficult to share data beyond departmental boundaries. If legislative components create challenges in sharing data, and data sources can't be leveraged effectively, legislation may be introduced to try to address this.)

.What does "done" look like? (The goal may be driven by questions like those asked here today. What "done" looks like can change on a daily/weekly basis. Try to determine this at a high level at the beginning.)

*.Ingest the Data Into the EBI* [Pull the data from the data source which usually requires the following...]

.Contract amendments (with the different vendor systems that we're working with) to support data extraction and loads (bring it into EBI platform); Future contracts will have added into the standard terms and conditions, that data will be able to be extracted into DHHS EBI, eliminating the need for extraction amendments.

*.Model the Data* (happens once the data is extracted from the original data source and into the landing zone of DHHS' EBI platform)

.Team of data analysts (DHHS and contracted vendors) with database experience to transform the data

*.Publish the Dashboard*

-Mr. Wieters/ The most time consuming components are identifying the goal, and going through the legislative process to make sure the data can be used properly. These are key components to make sure that DHHS is adhering to state and federal laws, as is securing the privacy of NH citizen's data, and using it the way it was intended. The modeling of the data is where we figure out "How does it relate to

our enterprise data sources?” and “What will be important for us to display in a visualization?” Shares next slide:

### *Future State and Next Steps*

*Goals:* (Continue to provide...)

*Department-* Provide a centralized platform consisting of all state data sources from which data driven decisions can be made based on information, analysis, trends. (Hoping this expands to a state-wide EBI platform that will help drive those data-driven decisions to be made based off of info analysis and trends.)

*Programmatic-* Provide a platform that programs and services can use to address are/service specific analysis and visualization of data.

[*Example:* Ability to detect and monitor conditions that may be environmentally-related.]

*Current Efforts:* COVID-19 Visualizations; Opioid Crisis Response Visualizations; Public Health Analytics Migration; Medicaid and Long Term Supports and Services Visualizations

*Ideas for Next Steps:* Prioritization of Data and Dashboards; Identify Legislation Impacts of the Prioritized Data; Funds to Support Resources in Data Modeling and Visualizations

-Ms. Chawla/ Currently involved with enhancing WISDOM platform (an internal platform) as it does not meet the Department’s needs. Improving the application to bring it to the next level- “WISDOM 2.0” to engage more data, data sets, and do more visualization as well. Interested in data linkage between environmental risks along with health outcomes. Avoids doing mapping together to avoid misleading data results. WISDOM 2.0 will have more topic areas as well as more indicators that will be presented to the public- and also to enhance performance on the data visualization site (using “+ableau” data visualization and software tools to provide a more interactive visualization). WISDOM 2.0 will be part of the DHHS public data web portal to engage the public and present on multiple health areas.

-Mr. Wieters/ re: the current ongoing efforts of Medicaid and Long Term Supports and Services... “This is where the EBI platform started and continues to grow from there.”

-Mr. Chalsma/ “DHHS had not gone through a phase of rethinking about its data warehousing, data analytics, public dashboards, and internal dashboards for several years so when it began to undertake this, some of the technology had become old. Currently bringing in state of the art technology that will work with the state IT Department. The tools being used are business standard and fairly expensive. Medicaid and Long Term Supports had an enormous volume of data that we needed to get our hands on so that was the genesis for this project- using Medicaid funds

to do the first big part of purchasing hardware and software. We have a very robust system thanks to Medicaid and that was possible because it was 90% funded with federal funds. That means that Medicaid and commercial insurance data is all part of the picture when we think of a new project. This makes it easy for the right person in the department, working with outside stakeholders, to get at the info they need. Having it grow is necessary to keep with that vision of tying together data where we can, and to have it easily accessible in a really high performance environment."

-Mr. Wieters/ In terms of next steps... Any time we're looking at different commissions/groups that are looking for, "How do we get those data sources and how do we address your needs?" we usually look for 3 different areas (see \* Ideas for Next Steps above and in slide presentation). Staffing is "inadequate to address all of the prioritized needs across the departments so DHHS seeks additional funds to offset the professional services we contract out for, to be able to implement these solutions. That is the end of the slide presentation so will answer any questions"...

-Sen. Sherman/ Very grateful for the presentation. Shared that "this commission is the current iteration of prior ones that sought a more robust data system capable of bringing all the different data systems together within DHHS." Asks if "EBI has the capacity to reach across to other departments?" Shared that via legislation from this commission there was an MOU (Memorandum of Understanding) developed between DES and DHHS in which Dr. Bush and Mr. Wimsatt have been very involved. "Will EBI enhance this kind of MOU that cross department understanding?"

-Mr. Wieters/ "Certainly. Currently the Department of Insurance is leveraging this platform as well as GOFER (the Governor's Office for Economic Relief and Recovery). DHHS has just entered into an agreement with the NH Department of Education where we're leveraging a preschool development grant to address education's data along with DHHS's data and combining it together."

-Sen. Sherman/ asks if the data from multiple departments (like Insurance, Corrections, etc.) "could be used to create a statewide data repository where a query could be made about something like well-water containing lead, while looking across at Medicaid and saying," "What about the socioeconomic factors it might... you take the DES map of private wells that might have high lead levels... and you correlate that with what might be happening on educational/socio-economic/corrections levels- looking for these relationships that might be occurring and being able to validate policy that would then be reaching out to address the concerns with the understanding that this data has provided us with a real strong argument for an intervention. Is that something that you can envision this being able to do in the future?"

-Mr. Wieters/ "Yes. That embodies the vision of what we hope this system would grow to. We started it out as a DHHS solution and built the infrastructure in such a



way, in conjunction with the Department of IT, so that it could be multi-tenant and expanded- allowing all of the departments to build off of it, and into it." EBI will allow them to use it for their internal data reports and visualizations. "It also allows us to then build those relationships and look at it at a state-level as opposed to a department level. It's out of scope for my team specifically because we represent DHHS but it's being built as an enterprise architecture for the state with the assistance of Commissioner Goulet (Department of IT) and his team. We have spread the news to other departments to begin to get them on board. Department of IT is a large component of running this system so it's not just a DHHS platform, it's a State of NH platform."

-Sen. Sherman/ Has a question for Ms. Chawla about her statements relative to being cautious about maps. Shared that the commission since inception "has had the idea of being able to build at least a conceptual map with all the data we have so we can look at environmental impacts (like arsenic or lead for example) that DES already has mapped in groundwater/well-water etc., and then being able to take some of the WISDOM-type data and overlay these. We understand we have to be careful about causation and correlation but are you cautioning us against being able to take these different levels of data (our maps) and being able to overlay them to look for what we're seeing in the environment in certain areas and also seeing disease outcomes clustered around that? Are you cautioning against this or is this platform pretty well-designed for that kind of bridging between two department's databases?"

-Ms. Chawla/ "We need to be cautious about presenting this type of data to the public" so as not to be misleading. Provided the example of bladder cancer and that "there are many, many environmental risks (even family history) that can cause/ result in bladder cancer. There is no specific environmental level. If we are to do this type of mapping, putting two maps together, we must be very careful of this type of utilization if this data is made publicly available. We might be able to do this internally and put maps side by side. That would be a suggestion."

-Rep. Salloway/ Wants to follow up on Sen. Sherman's questions but "move from structure to process and find out what the next administrative issues are for us." To his understanding, DHHS is constructing a database that ultimately is going to interact with WISDOM 2.0, and it's going to be a database for conducting inquiry. Wants to clarify that use of that database will be for internal DHHS decision-making and DHHS is prepared to work, on a contract basis, with organizations that want to make inquiries of that database and need access to it (Examples: federal, non-profits, for-profits, etc.). To further his own understanding, wants Mr. Wieters to assume the legislature wants to make a series of inquiries (into, for example, environmental risk and health outcomes, or insurance coverage and health outcomes, etc.), and asks if "DHHS has the staff to answer those inquiries without an exchange of funds? Are you adequately staffed to do that?"

-Mr. Wieters/ "The answer is almost certainly, No. Other states might have a Chief Data Officer or a department dedicated to this type of function, but NH does not. DHHS would do their best to access the information but would be challenged to provide complex inquiries that combines data across departments, there is not a team focused on that right now. DHHS would seek grant funds or other state funds to contract out with vendors that have those resources to help DHHS build those models and address those more complex questions more effectively."

-Rep. Salloway/ "Would you sub-contract that work out rather than creating positions within?"

-Mr. Wieters/ Seeks clarification of the question.

-Rep. Salloway/ Provides the example... This commission comes to you and says we have to have data on a very specific problem. You have a huge database. You turn to us and say, "We've got a whole line of inquiries from within DHHS, from people who have contracted with us with our limited resources, and you now want us to answer these very complex questions. If you can come up with the funds, we can subcontract that work to somebody at Dartmouth Institute/ UNH Department of Health Management and Policy." (Rep. Salloway adds, "Wonderful department- I highly recommend it!"). You would say, "This would allow us to stay agile and lean and get the work done." "Is this something we (meaning the Commission) can do?"

-Mr. Wieters/ "Absolutely! That is actually how we operate today. For the most part, our teams are set up to maintain and operate the existing system and pull what's already there and modeled. When we get these complex questions, we look for funds first to subcontract that out to Deloitte" (which was awarded the contract by bid) that does a lot of the work with us. DHHS also leveraged some other vendors to help with dashboards but Deloitte is the primary subcontractor. Subcontracting this work is the quickest way to complete this work. Building an internal team that can help guide that is also very effective- maybe not to be the persons developing the solutions but helping to guide the strategy from a state perspective- having those resources as state employees may be a benefit in the future. We'd be looking to that as an option in the future- to have a small team to help guide the state from an interdepartmental perspective, and then from a subcontracted perspective to address those complex data modeling and visualization efforts. This also helps DHHS stay agile and lean and only have a data scientist when there is actually a need as they are expensive and rather difficult to hire for full time (easier to source through vendors like Deloitte.)

-Rep. Salloway/ Thanks Mr. Wieters.

-Hon. Messmer/ Thanks the DHHS presenters for a great presentation. Not sure "which data sources DHHS is using" but as the commission is concerned about children and special needs education spending (by district), combining that with environmental data, etc., especially as we know that things like unleaded gasoline

and arsenic, etc., had been previously looked at in terms of educational impacts on children. Wonder "if that is one of the data sources you're able to key into?" Recognizes the sensitivities around public presentation of this data but wonders "at what level DHHS is maintaining the ability to look at this data. Is it down to zip code level or lower?" Realizes "the data would have to be aggregated for public presentation" but wonders if DHHS "is preserving the ability to do that."

-Mr. Wieters/ "Often, internally DHHS is able to go down to the street zip code level but publicly the data must be aggregated, following strict rules to do so. Usually the aggregate is by county level but sometimes we go to the town level. It really depends on the data itself and whether or not you can constructively identify individuals from the data being presented." DHHS goes through efforts to analyze the data dashboards that are presented publicly before being made public so constructive identification can't happen.

- Sen. Sherman- Must step away from the meeting for 5 minutes and asks Rep. Salloway to Chair the meeting until his return.

-Rep. Salloway/ Asks if data can be down to the census tract level.

-Mr. Wieters/ "May be a bit, based off a data source." Suggests that his colleagues may be better able to address this.

-Mr. Chalsma/ Believes it is "particular to the data source. Some are geocoded and allow that, and some are not." "Wherever it's necessary and we have street address that can happen." It's not as much of a challenge to access that info as previously. It is only stored in certain data sets. Only certain data sets have had that process applied to it. It's not a routine thing- but obviously, for environmental health related things, it's really important.

-Rep. Salloway/ "The zip code data is not useful. The census tract is."

[@ 12:57 PM Mr. Wimsatt notifies the Commission Clerk and apologizes for having to leave the meeting early.]

-Mr. Chalsma/ (To Rep. Salloway's comment.) "Right."

-Hon. Messmer/ "How about the special needs question?"

-Mr. Wieters/ "We are currently in the infancy of the preschool development grant, identifying data sources." He is "going to put that on the list to make sure that the team is doing that." Not personally on the team so will bring it to them so that can be addressed. It's really focused on early childhood development and the impacts of what we can/are/are not doing in preschool development that could be addressed earlier so that we can have improved future outcomes. That would be a key component of special needs spending as well.

-Mr. Chalsma/ "There is an extra layer of challenge around data privacy, because there's federal law about sharing educational records. There's HIPAA and FERPA

and the privacy of some environmental data in some cases. Those are big challenges. Sometimes things can become more feasible over time if you can identify why data sharing is important and what can be done with it." Wants to emphasize what Mr. Wieters was saying earlier... "Having the platform and the policy and procedures now in the state is a huge advancement. Department of IT (DOIT) is on board with this concept. Some initial like pilots around COVID have been done with the Department of Education because there's some shared data there. Things are now working on a technical level which is a big win for everybody." Now it's about, "How do you create these shared data projects and make people feel comfortable about both sides seeing the data? As everyone works for the State of NH, it should be possible. Any important policy issue- you should be able to get there."

-Hon. Messmer/ "That's why I brought up spending as an indicator of the level of need in a community."

-Mr. Chalsma/ "Yes."

-Mr. Chalsma/ "Yes. Exactly. That particular preschool development grant is going to be interesting. That has as its vision, grabbing and looking in, as broadly as they can, at all sorts of different data sources. They may be a good pilot for involving education and health data together."

-Rep. Salloway/ "Further questions?"

-Ms. Costello/ "Have a question that may be for Dr. Bush and Mr. Wimsatt though I don't see him anymore." [Mr. Wimsatt had to leave the meeting earlier.] Asks Dr. Bush if she is "aware of any funding on the horizon, through EPHT or other resources for building out a module or section within EBI related to environmental data?"

-Dr. Bush/ Thanks, Ms. Costello. "This speaks to identifying shared priorities. Our federal funders have priorities. As a program, we have a priority within the larger Division, priority within the larger Department priority, and then (have to consider) how does that marry/ couple with DES' priorities. Yes, there's opportunities. It's just concretely identifying what those priority areas are." Dr. Bush is part of a five member funded team at the state. If agreement was reached within the Division, within the Department, what to put energy and resources toward, there's certainly opportunity. Dr. Bush's team has been talking with Ms. Chawla about what they envision. "WISDOM 2.0 already is a private well water dashboard where we would work with DES to aggregate that data. Another example... leveraging funds from Governor allocation in the groundwater source water protection fund... radiation monitoring data from the Public Health Laboratory and developing a radiation monitoring dashboard to make that data publicly available." ... other examples that are ongoing around the biomonitoring program. That's a great example of shared data with well data and then human specimen. "These are all certainly ideas and things that are actively being worked on in the Tracking Program. It is really about

legislative priorities, community priorities, and agency level priorities, and marrying that with real funding to support it. Some things are in the pipeline. Some of the really big complex questions of the Commission will require a bigger investment of resources (rather than project by project)- where we will have a truly automated query system. That's really not what we're talking about right now as what we're talking about right now is very 'people-powered'. It takes people to model and visualize the data and make that accessible."

-Rep. Salloway/ "What are you looking at for a roll out of WISDOM 2.0?"

-Ms. Chawla/ Currently, the WISDOM dashboard performance is not adequate to allow multiple users to access one dashboard at the same time so the Department is looking at what is available on the Tableau dashboard software tools to enhance the technology performance. Current WISDOM 1.0 content and visualization must all be migrated to WISDOM 2.0. Also looking to add Medicaid data and Environmental data from DES if it is available. There remains a lot of work to be done with great attention to maintaining privacy rules.

-Mr. Chalsma/ Asks when the first "roll-out" might be expected.

-Ms. Chawla/ Ms. Chawla's team is working with Mr. Wieters' team and DOIT and a new cloud environment is in place. The application side will be migrated from Amazon Cloud to the Department Cloud by late summer/Fall 2021. That's both the goal and necessary timeline d/t licensing due-dates. "Timeline is to have WISDOM 2.0 in place by Fall 2021."

-Rep. Salloway/ Assumes that there will be some interoperability challenges to solve as this occurs.

-Ms. Chawla/ "There are many challenges- operational, staffing (the major challenge)", etc.

-Rep. Salloway/ Thanks Ms. Chawla. Seeks other questions?

-Rep. Woods/ References discussion relative to one of the slides where "transforming the data" was described as one of the steps. Wants to ensure that data integrity is maintained and thus, has a bit of concern. Not sure what is meant by "transforming data."

-Mr. Wieters/ Provides a generic example of the goal of the transformation... In one data source, it says "David Wieters lives at 123 Elm Street", another data source says that "David Wieters lives at 123 Elm St.", and a third says, "David Wieters lives at 123 Elm." The transformation automates it, does some other checks, and says "What other items associated with David tells me that all these of those records are the same?" It does that transformation and stores it in the data warehouse as "123 Elm Street" even though it came from three different places, three different ways- but I know that it's a 100% fact, that this is all David Wieters and he lives specifically at 123 Elm Street. "It's maintaining data integrity because

it's based off of rules that we know that we are matching the data properly. It is to make sure that when we're presenting it, we're not duplicating the data (otherwise it would show 3 records/entries for that one person). This is one example of one kind (there are a lot of different kinds) of transformation."

-Rep. Woods/ "It's a clarifying process and if anything, maintains integrity rather than loses it.

-Ms. Costello and Dr. Bush/ (nod silently in agreement)

-Mr. Wieters/ "Yes."

-Hon. Messmer/ Asks if Mr. Wieters' group gets direction and funding through DHHS as his group is part of DHHS. "How does that work? Is there some sort of separation?"

-Mr. Wieters/ "Correct." Works for DHHS, the Information Services Team, and "has matrix responsibility for all the different technology systems." He is "like a liaison between us and DOIT." "All funding and solutions are DHHS directed. However, there is nothing in the grants/funding that precluded an infrastructure that could be leveraged which would have to be cost-allocated but could be leveraged by other departments." "That's what we did. We implemented a scalable architecture so that other departments could 'play in the same sandbox.' They would however, have to invest in it." For example, DHHS can't use federal dollars to support the Department of Safety (DOS), but DOS could leverage our platform for their needs. "We could use federal funds to implement a combined opioid crisis response where we actively work with them to see how we could leverage their trauma emergency management system and combine it in. DOS would then benefit from the dashboards as well, leveraging those funds... Making sure to follow federal guidelines on how we use the federal funds, while also looking to see how we benefit the state as a whole. The Department of Insurance invested their own budget dollars to enhance and leverage the platform. They were able to buy a portion rather than the entire infrastructure, and can add on to it."

-Hon. Messmer/ "Would DES have to buy into it as well?"

-Mr. Wieters/ "Yes. Essentially... In order... What we could do though is... like again... it goes to braiding a fund so if there's a combined priority where (for example), Dr. Bush is working on something from EPHT, and we have funds from DHHS that could fund the project, but it also happens to benefit DES, that is a way in which we're able to incorporate other departments. But if DES wanted to go on their own and wanted to do something specifically without leveraging our data sources- or that was not in combination, then they would need to leverage their own funds at that point."

-Sen. Sherman/ Apologizes for having had to take a prior brief hiatus. Asks if the question that needs to be answered can drive whether or not you are able to keep this under your original funding source? Provides an example relative to the work of

another advisory council that also involves DHHS- talking about the informatics-complex incorporation of information that bridges many different sources... Asks if "At the public health level, would that be an umbrella that would also be included within your grant?"

-Mr. Wieters/ "We have several different grants but yes, as public health is within DHHS, it would certainly be included. DHHS was a great place to start as it impacts, and has data sources that are related to many other departments within the state. Because DHHS is intertwined, it can leverage those funds to continue those efforts and enhance them. If one of the other departments has a very specific need that's not related to DHHS, they would have to buy the licenses themselves to be able to do their own data analytics off of the system. If DES wanted to do dashboards just for their programs and services, not in conjunction with the DHHS programmer initiative, DHHS would not be able to legally bind the DHHS funds for that. They would have to pay for the professional services to implement those."

-Sen. Sherman/ Referencing the MOU that came out of a prior iteration of this commission, seeks confirmation from Mr. Wieters that if you'd be querying trying to marry the databases of DHHS and DES to look at bladder cancer and arsenic; or neurologic or behavioral issues in kids and lead levels; all that would still fit within the rubric of the original intent of what is being done.

-Mr. Wieters/ "Absolutely."

-Sen. Sherman/ "That's helpful."

-Mr. Wieters/ "The nice thing is we can paint with a pretty broad brush and our federal partners are fairly malleable as long as we can show how it benefits DHHS' programs and services, which, for the most part, every question I heard today seems to fit in with what we're looking to do as well."

-Mr. Chalsma/ "As more and more data comes into the system, it gets leveraged for all sorts of different purposes within the Department. It's being used right now for things that have nothing to do with the initial funding. It's like we bought this great machine and filled it with good stuff and now we can use it to turn out all sorts of things- assuming there's a person there to do the analysis/querying."

-Sen. Sherman/ Can "tell by the looks on Commission members faces that this is really, really exciting." Checks to see if there are more questions...

Hon. Messmer/ Seeks info as to where DOIT fits in in the scheme of these matters. As it was mentioned that they are complicit in some things, "Do you have to check in with them? Where are they housed in terms of funding? Where do they get their funding and where in the umbrella over this DHHS group do they sit?"

-Mr. Wieters/ "Since the majority of the work is currently DHHS driven, they're sitting in our Class 27 line item budget to support the resources that are focused on the services. When they work for another department, they attribute their time in

using job numbers in our financial system to those departments (equivalent Class 27 line items). So- they're General Fund, but for DHHS they're cost allocated across multiple programs. We have a dedicated team whose function is to maintain the jobs back end- maintain the production, and the promotion into production in their part of each and every agile team that's working forward to deliver systems... so we don't have any bumps in the road in getting to a final publication. We have (I believe) four dedicated staff that are working from DOIT." The goal in the biennium after next, is to move that team into more of a shared service (akin to something like email and file services) for the state. "At that point they'd have a governance process on how the resources get allocated and which projects move forward. The way the system is set up, once the data source has been pulled into EBI and it's been modeled and is available for use; if you have teams like Mr. Chasma, Ms. Chawla, and Dr. Bush, we give them access to the data so they can build their own dashboards. There's a process to promote them from development into production and it's a pretty well-oiled process to do that. The additional resources are for when you're pulling in new data sources, working on legislation to allow us to use the data source, and doing the initial visualization. There's no additional cost to house the dashboard. If you have the resources within the teams like Dr. Bush has, and maybe DES as well, they don't need professional services if they can develop them themselves. The larger and more complex it gets, the more likely we would need to subcontract out the services.""

-Hon. Messmer/ Recognizes there are some platform communication issues but wonders if there is an effort underway to pull in Department of Correction's (DOC) data."

@ 1:21 PM -Ms. Costello/ Apologizes for needing to interrupt but has to leave and wants to express her "thanks to the DHHS presenters for the invaluable information shared and their great presentation. Knows we will have more conversations in the future about how this can be used." Thanks the presenters for their time.

-Rep. Salloway/ Apologizes for having to leave as well. Thanks presenters.

-Mr. Wieters/ (Responding to Hon. Messmer's prior question re: Department of Corrections data) "Unaware of any direct efforts to bring in DOC data." "It's in his backlog of items to address and 'bring over', but COVID" interrupted that schedule. Confirms that is "an interest but is not aware of any funding or efforts moving right now."

-Hon. Messmer/ Questions if "there is any information about DOC and COVID?"

-Mr. Wieters/ "Yes, there is."

-Hon. Messmer/ Asks, "That you are using right now?"

-Mr. Wieters/ "No, not in the Enterprise platform yet- but that is a good point- to try to pull that data source in."



-Sen. Sherman/ Missed the question and asks if it was about DOC.

-Hon. Messmer- "Yes."

-Sen. Sherman/ "In 2016 I put a bill in with the work of Tyler" (Brannen, Dept of Insurance) "and John Williams- we used the money coming from CON" (Certificate of Need) "to build a platform across Corrections, Insurance and DHHS to create a database that would have all of the health information for the state as those are the three departments that deal with health and health insurance. It made it to the Senate but when a member tried to attach a poison amendment to it, it died. It sounds like this would have the capacity to do that with just a MOU with the DOC. Is that correct or will additional legislation be required to create that level of database?"

-Mr. Wieters/ Doesn't know "but will follow up." The "first step is that key component- identifying the goal. Will have to look at the legislation that's governing that." It may be that if legislation was needed before, it might be necessary again.

-Sen. Sherman/ "It was mainly a funding issue before because they didn't have any bridge software or bridge database." Tyler (Brannen, Dept of Insurance) and John Williams would be good resources to discuss that. Offers to talk more about this with Mr. Wieters. "The idea was to bring all these data points together on health in the state because without any one of those three, you're really getting an incomplete picture of state-based healthcare."

-Mr. Wieters/ "That's a very good point. Going back to Hon. Messmer's question about DOC... We do have the DOC COVID cases included within our COVID data though they are not specifically identified as DOC originations. This is a good point. Need to get DOC and Department of Insurance. We have a lot of different gaps in terms of how we address our data sources and if we didn't have legislation to deal with, we could do it quicker. It is important in all states to maintain the privacy of our citizens." Understands the need for the legislation... "Working through and understanding the intent, and making sure we adhere to that- and then provide better services and programs as a result of bringing the data together- which we will. My hope is to get DOI on. The Department of Insurance (DOI) is starting to engage in the platform. Now that they are starting to engage, we can start building those bridges of our data sets together. Bringing up DOC was a really good point. If we bring them in as well we'll have a more holistic approach to health data."

-Mr. Chalsma/ "It is on our roadmap related to the opioid crisis and behavioral health generally. Commissioner Hanks has been interested in sharing data with the Health Department. I think it's a matter of nailing down the legal issues and then the funding for the integration of the data." How easy or difficult it is to bring data in depends upon how people have things set up. "We are doing a bit of pilot work with Medicaid to at least know if someone is incarcerated to look at profiles of people who've been incarcerated. Their particular health system data is a real

unknown for me, too. I think it's a good point to follow up on. Think of them as a key future partner. They need help with their data systems, too."

-Sen. Sherman/ Sits on the Governor's Council for Corrections and Mental Health and "this has come up multiple times." "Unaware that you were this far along. This is incredibly exciting. Thank you!"

-Rep. Nelson/ States that "COVID numbers from Corrections are made public by counties on TV." Wonders where that info is obtained.

-Sen. Sherman/ "Info is released by county" which "doesn't come under 'state corrections.'" Suggests Mr. Wieters may have more information.

-Mr. Wieters/ Apologizes for any misunderstanding. Clarifies that "it's not that we can't put the data out. It's put out at the county level and we do have some level of visibility to the Department of Corrections data at the state level as well. We have not ingested it into our EBI to be able to display it in our COVID 19 dashboards to narrow it down to say that these are DOC/ people who have contracted COVID 19 in the DOC. It hasn't been a filter that we've ingested yet. It is a goal and a good goal to have that data. Want to clarify that it's not that the data isn't there, it's just that it's not pulled into one centralized place yet."

-Rep. Nelson/ "Thank you."

-Sen. Sherman/ Was "thinking about issues related to the Governor's Council that I sit on... The idea of being able to access Medicaid and whether or not you're able to pick up Medicaid upon release from prison. Then, being able to correlate that data to recidivism rates... You can just imagine the power of this data if it can be married. It's really, really exciting stuff! I'm getting awfully close to living in Dr. Bush's world there!" Asks if there are any other questions for the team. Seeing none, thanks the three DHHS presenters.

-Mr. Wieters/ Thanks Sen. Sherman and Commission members.

-Dr. Bush/ Thanks the DHHS presenters.

Presenters leave meeting @ 1:30 PM

-Sen. Sherman/ Is "very excited about what we heard today." While this information is fresh in our minds, asks Dr. Bush how she "thinks we can make this actionable."

-Dr. Bush/ Pulled up the charges of the Commission. Thinks "a key step for the Commission is to come up with concrete recommendations." Recognizes that "we want the whole world of environmental health at our fingertips but we've heard that it still takes 'people-power' to model the data and make the visualizations. What is our short list then? If we're going to put resources towards building something, what should that be? Should it be PFAS/arsenic and health outcomes? Should it be children's health? I think the charge for us is to help prioritize the environmental

priorities for when the State Health Assessment and State Health Improvement Plan Advisory Council (SHASHIP) is meeting and discussing environmental health. What are the priorities within an environmental health bucket? Once we have a priority, and a shared priority across agencies, and a shared priority with the legislature, then (as Mr. Wieters said) we find the resources to build it. What's most important to either drive policy or answer unanswered questions where we want to have data to help us?" Believes "this has been the challenge since the beginning... What are the priority topics to really put our resources towards?"

-Sen. Sherman/ Thinks "our challenge has evolved somewhat because our challenge originally was this kind of data access and being able to query data just didn't exist." Though we had the data, it wasn't something we could readily go to and ask questions of it and come back with answers. "Maybe our next meeting should be to take what we've learned, what we've got from our data and education subcommittees, and sort of have more of a 'free-thinking, where do we go from here with all of this' session? An hour/hour and a half of really trying to pull together our collective thoughts on next steps for this Commission." Sees Hon. Messmer's hand raised and calls on her to speak.

-Hon. Messmer/ Asked if we are able to meet (via Zoom) in subcommittee's yet?

-Sen. Sherman/ Confirms that subcommittees can meet.

-Hon. Messmer/ A path to make that happen for House subcommittee's has not yet been confirmed.

-Sen. Sherman/ Remarks that Ms. Horgan is present and "We can check to see if subcommittee's can meet. Actually SHASHIP is meeting but as they're under DHHS, they have a slightly more robust ability to do some of this."

-Hon. Messmer/ Requests clarification as to what "SHASHIP" is.

-Sen. Sherman/ SHASHIP is "the State Health Assessment and State Health Improvement Plan Advisory Council. It was created by legislation passed a year ago and is working to develop the state health improvement plan. It's an ongoing Council without an 'out' date. It will be working on issues of public healthcare state-wide, long-term. The charge is now to develop this required state health improvement plan. There are a lot of parallels with all of these different commissions and a lot of cross-pollination. These all have real implications." Asks if "this is something that everybody would be in favor of for our next meeting." (Members nod.) Suggests members "go back over the last several meetings and review minutes/presentations so we can discuss next steps for this Commission at our February meeting."

-Hon. Messmer/ Mentions that the "data group had some recommendations for presentations" for consideration that "we don't want to lose track of." Asks Dr. Bush if she recalls what those were.

-Dr. Bush/ Pulled up our data subcommittee notes. "We'd talked about having the Birth Defects Registry present as a specific example of a registry that had lost its funding but is pursuing new funding... We are all familiar with the Cancer Registry. The Birth Defects Registry is one more data set that I think we're interested in as birth outcomes or birth defects may be relevant from an environmental health perspective. One idea was to invite the Maternal-Child Health Program to give a presentation on the birth defects registry as an example of a registry that may be tracking outcomes of interest."

-Sen. Sherman/ (Notes Hon. Murphy's hand raised and calls on her to speak.)

-Hon. Murphy/ "One of our other stated interests that may not have made it on the list was an interest in special education and costs associated, etc. It also came up in our conversation today and would be helpful."

-Sen. Sherman/ Questions if the Department of Education is where that function would be housed.

-Dr. Bush/ Confirms her belief that is true. Mentions that Mr. Wieters stated that "they're just beginning to engage with the Department of Education around the preschool development grant". Dr. Bush "knows that the Lead Program at the Health Department is also interested." Believes "they're having some conversations at the agency level around who the right people are" so doesn't "have a name or contact. They're trying to do some relationship building. I can try to follow up specifically if we wanted to try to find someone to give that kind of presentation", but "thinks the question before us is, Do we want to have more of those presentations or do we need to do some of our own visioning and prioritizing to know then which of these presentations fits best?"

-Sen. Sherman/ Thoughts? (No response from group.) "We can see if we can get the Birth Defects Registry for our next meeting. Not sure how we could track down Special Ed but can look at the Department of Education and then have our re-group in March as those have been suggested out of the Data Subcommittee."

-Hon. Messmer/ "I think that makes sense to gather up as much info as we can get, and then re-group."

-Sen. Sherman/ Asks Dr. Bush to work on acquisition of a presenter from the Birth Defects Registry, and states that he and Jenny "will work on the DOE/ Special Ed presentation."

-Dr. Bush/ Nods in agreement.

-Ms. Horgan/ "Sounds good to me, Senator."

-Dr. Bush/ "Do we have a meeting scheduled for February? Or is that the next item on the agenda?"

-Sen. Sherman/ "That would be our last item of business. Everybody pull out their calendars." Asks if 2/19/21 at 12 PM-2 PM works for everyone.

-Commission members nod in agreement

-Sen. Sherman/ Asks Ms. Horgan to "put this meeting date and time in the Calendar" and states they "will start working on presenters." Asks Dr. Bush if the Cancer Registry should come back to present, if we are "up to date on them", or "if they've changed significantly?" Looks to Dr. Bush who appears to indicate that there hasn't been significant change, so Sen. Sherman acknowledges that and says, "No" (indicating an understanding there is no need to schedule a Cancer Registry presentation.)

-Hon. Messmer/ "Their data is being already being incorporated into the dashboard, WISDOM 2.0... they're already in there so there's no real need."

-Sen. Sherman/ "So, we'll work on those two presentations... Gary?"

-Rep. Woods/ "Just a side thought... Given what we've heard today, the ability to look at a lot more data, our wish list of what we'd like to do, has been greatly expanded. Who we can have come present...hmmm... We're now looking at who is going to present versus what we're going to do... it's a never-ending process."

Sen. Sherman/ Agrees. Thinks that he, Rep. Woods and Rep. Nelson "will have to think about this being an incredibly tight budget year." Says "there hasn't been much success trying to get more support to DHHS." Thinks "some of the IT work being done right now is almost limitless in the ability for it to inform policy." Hopes in their respective constituencies "we can support the Department as they ask for this." Asks Dr. Bush to let the three mentioned and Rep. Salloway know, and "they can pass it along to Sen. Bradley, although he may already be aware, where in the budget some of the support for this IT work lies so we can specifically make sure it's left intact."

-Dr. Bush/ "Yes. Thinks that's a great idea." Will "reach out to today's presenters." "Knows that there is an IT piece in the Capital Budget separate from the Program Budgets- it's really infrastructure."

-Rep. Woods/ "It's very hard to put a firm number on it, but the ROI for good data downstream certainly makes for a lot of cost savings."

-Hon. Messmer/ "As evidenced by the pandemic"... (members nod and smile)

-Sen. Sherman/ Asks Rep. Nelson if he has any thoughts...

-Rep. Nelson/ Would "like to see anything we need prioritized. In other words, if we needed some more people, what things would you get if one person was hired, two three... because we may not go for the whole thing. What would the first priority be?"

-Rep. Woods/ "Same for topics, too. The ROI for one area for say, lead vs something else, what would come into play as well?"

-Sen. Sherman/ "That's where understanding some of the Special Ed data and neurobehavioral issues with the lead issues- that kind of thing"... Asks Hon. Messmer to confirm "that arsenic is becoming more of a concern for neurotoxicity."

-Hon. Messmer/ "Yes." Nods and affirms.

-Sen. Sherman/ "The long-term costs of neurotoxicity from children are overwhelming."

-Hon. Messmer/ "And PFAS as well."

-Sen. Sherman/ "And PFAS as well. We're seeing just the other day that the former Governor of Michigan was indicted for his role in the Flint water crisis... Mindy and I have met the pediatrician who unroofed all of that and brought it national attention. The impact on their child development world for an entire generation is going to be enormous. What Rep. Woods is saying about good data driving good policy and really having a real impact on the fiscal component is absolutely true."

-Hon. Messmer/ "Also on things like pediatric cancer that is so incredibly expensive to treat and the impacts on the child are life-long."

-Sen. Sherman/ Agrees.

-Rep. Woods/ "An example we can fall back on is the mercury episode from about twenty years ago. That had wide-ranging impact as well."

-Sen. Sherman/ "Right." Thanks Ms. Hogan and members for a great meeting. "Next meeting will be on Friday February 19<sup>th</sup> from Noon-2 PM. Hopefully we'll have those two presentations then, and in March we will use that meeting as a re-group where we take all that we've heard and try to come up with some priorities that we can move forward on."

Meeting and video ended at 1:52 PM without a roll call.

Notes respectfully submitted and emailed to all members 2/18/21,

Nancy Murphy

