SPACE Tool 2.0 Webinar Audience Questions

May 14, 2024

Q: To clarify-the tool predicts the increase or decrease in number of cases based on funding changes, assuming local rates are unchanged from year to year?

The tool predicts the increase or decrease in the number of infections based on funding changes, compared to what would have been expected under the current budget. This is based on a scientific study that evaluated the impact of federal STI funding to states on reported STI rates over a 35-year period. The tool does not make any assumptions about trends in the underlying local infection rates.

Q: Can you create exportable reports?

The tool does not create reports, but it does provide an array of default visualizations (charts and tables for each infection and for all STIs excluding HIV). Users can customize the number of years displayed and copy/paste the charts and tables into another application such as PowerPoint or Word for further customization. We explain how to do that in our training materials on *JPHMP Direct* at https://wp.me/p7I72S-9MK.

Q: Does it explain somewhere how "STI attributable HIV infections" is calculated?

This is explained in detail in our scientific article and accompanying technical appendix in the *Journal of Public Health Management and Practice* at https://bit.ly/3U9eyjy. The short answer is that for chlamydia, gonorrhea, and syphilis, we assumed that each infection had a very small probability of leading to an STI-attributable HIV infection. This probability was based on published mathematical models of STI and HIV transmission dynamics.

Q: Where do we get the # for funding? Is it specific $ for STI or our organization's total budget?

This should be funding specifically for STI prevention. SPACE Tool 2.0 is based on a scientific study that evaluated the impact of federal STI funding to states on reported STI rates over a 35-year period.

Q: Population served is the jurisdiction (i.e., city, state, whatever) correct? Not the number of people in a particular clinic? And rates would also be from the entire jurisdiction selected?

Yes, that is correct. Users should enter the total Census population and cases in the jurisdiction. In SPACE Tool 2.0's main user interface, clicking boxes with the "i-icons" will bring up dialogue boxes that provide specific definitions for each measure.

Q: Is it okay to use inflation adjusted dollars, or would you not recommend that? Some of our funding has stayed the same over the past 4 years, and we were hoping to still show the impact as those dollars are not equivalent due to inflation.

SPACE Tool 2.0 is based on 2022 US dollars. If you wanted to examine how "flat funding" could lead to increases in STIs and related costs, you could do this by converting your funding values to 2022 US dollars. It does not have a feature to examine a series of annual reductions in funding (due to inflation), because it only examines a one-time, permanent change in funding. However, one way to approximate the impact of inflation would be to assume a small percentage decrease in funding. For example, you could implement a scenario in which funding decreases by 5% to illustrate how a reduction in purchasing power due to a hypothetical scenario of inflation could impact future infections and direct medical costs. When presenting your results, you could explain that such a reduction could be due to a dollar amount reduction or the impact of inflation.

Q: I have a state budget which focuses on syphilis disease intervention, with other funding on a local tribal health dept. level which focuses on CT/GC. Would this work with just focusing on the budget which focuses on syphilis or would we need to get all of the different local and tribal health dept. budget as well?

SPACE Tool 2.0 is based on a scientific study that evaluated the impact of federal STI funding to states on reported STI rates over a 35-year period. The funding measure used in that study was federal funding from CDC to states and directly-funded cities such as New York City. Although the published paper examined the percentage change in STI rates associated with a percentage change in funding, for SPACE Tool 2.0 we converted these findings to an estimate of the percentage change in STIs associated with an absolute change in STI funding. Although state and local government funding was not included in the analysis, we think it would be reasonable to assume that additional dollars of STI prevention funding would have the same estimated impact, regardless of whether the prevention funding came from federal, state, local, or other sources. Based on our interpretation of your question, we think it would be reasonable to use the tool to examine changes in your state syphilis prevention funding. You could do so without including data on local and tribal funding for public health. However, if you focus only on syphilis-specific funding, then it would be better for you to include only the syphilis-related

outcomes from SPACE Tool. To do this, you can enter “0” for the number of chlamydia and gonorrhea cases in your jurisdiction. However, we note that this approach might underestimate the impact of syphilis-specific funding, because SPACE Tool 2.0 is based on estimates of “general” STI prevention funding. We also suggest that you be explicit about the budget numbers that you include in your analysis.

Q: I understand the purpose of SPACE is to show the impact of budget allocation changes, but I would like to show public health partners the medical and social cost savings resulting from lower early/congenital syphilis morbidity. Does SPACE provide such information? If not, are the economic assumptions viewable to calculate such costs?

We agree that it is important to consider congenital syphilis. It is not in SPACE Tool 2.0 because the specific scientific information needed to include it in this model is not available. However, we encourage you to look at the STIC Figure tool, which includes congenital syphilis. Although we are in the process of updating STIC Figure, the current version is still available for your use. https://www.ncsddc.org/resource/cdc-sexually-transmitted-infection-costs-stic-figure-and-users-manual/ Additional details about the calculations are in the model documentation (embedded within the tool) and our scientific paper and accompanying technical appendix (https://bit.ly/3U9eyjy).

Q: Is there a way for LHD with DIS to look at RW funding even if the state STI Program isn't requesting this funding?

For programmatic issues not directly related to SPACE Tool 2.0, we recommend connecting directly with your program consultants and project officers.

Q: I've never used SPACE before, is there a function where we can calculate the cost efficiency of prevention funding? (i.e. DIS FTE costs "x" amount of money over time, but comparatively aiding with medication for a PLWH costs a "y" amount over time.)

SPACE Tool 2.0 does not provide estimates of the cost-efficiency of specific program activities, like disease intervention specialist (DIS) activities. However, the tool does provide an overall approximation of prevention funding by calculating the direct medical costs averted when additional funding is received. For jurisdictions with a moderate to high STI burden, SPACE Tool 2.0 generally predicts that over time, STI prevention funding “pays for itself” in direct medical cost savings.

Q: ELC funding under SET-NET should be considered for congenital syphilis work. Arkansas presented their work on CS cases averted recently. Why are more states with abundant ELC funding not considering including STD/STI Control concerns in the ELC application/re-application?

For programmatic issues not directly related to SPACE Tool 2.0, we recommend connecting directly with your program consultants and project officers.

Q: Looks like a great tool! I will have more questions when I use it. Who should I contact for questions at CDC?

Please contact Harrell Chesson at hbc7@cdc.gov.

Q: Are there any ongoing studies/public dashboards where the Space Tool is in effect (publishing funding-to-outcomes/impacts? And if a similar tool is developed for something like Ticks or Opioids is the SpaceTool 2.0 tool constructed in a manner that is 'repeatable' for other federally funded interventions? "A Health Outcomes Tool", to share with the Public Health community?

SPACE Tool 2.0 is not available as a dashboard. Based on input from our pilot users, we designed the tool as a downloadable spreadsheet that would be in a familiar format for users and allow them to save their work. Users wanting to learn more about our tool so they can develop methods to model the impact of funding on other public health outcomes can read additional details about the calculations in our scientific paper and accompanying technical appendix in the *Journal of Public Health Management and Practice* (https://bit.ly/3U9eyjy). Additional tools developed under the CDC cooperative agreement that funded this work are available at https://www.cdc.gov/nchhstp/neema/tools.html.

To our knowledge, no published studies have used SPACE Tool 2.0 or previous versions of the tool. However, published studies have used a modeling approach similar to the one used in SPACE Tool 2.0, based on the same 35-year study that informs the SPACE TOOL 2.0 model. For example, one study examined the estimated impact of the implementation of a national funding formula to determine state allocations for STI prevention. [Aslam MV, Chesson H. The Estimated Impact of Implementing a Funding Allocation Formula on the Number of Gonorrhea Cases in the United States, 2014 to 2018. Sex Transm Dis. 2021 Sep 1;48(9):663-669]

Q: Is there any way we can add our funding in SPACE tool and estimate healthcare costs that could have been saved with early case identification using the funding we have?

The interpretation of SPACE Tool 2.0's output is in terms of infections (chlamydia, gonorrhea, syphilis, and STI-attributable HIV) and direct medical costs averted due to a funding increase compared to what would have been expected under the current funding level. For funding decreases, SPACE Tool 2.0 estimates the additional infections and direct medical costs compared to what would have been expected under the current funding level. SPACE Tool 2.0 does not provide granular detail on the specific types of prevention activities. We encourage you to look at the STIC Figure tool, which allows you to examine specific prevention activities in more detail. Although we are in the process of updating STIC Figure, it is still available for your use. https://www.ncsddc.org/resource/cdc-sexually-transmitted-infection-costs-stic-figure-and-users-manual/