Ryan White Program Severity of Need (SON) Index: Draft Index Summary and Results

Presented to
SON Panelists

October 31, 2007

Overview

- Measuring Severity of Need (SON) is not new
- Why do we need to improve the measurement of SON?
  - The data are largely qualitative
  - Determination of need is subjective, and data are not comparable across jurisdictions
  - Methods are burdensome to Grantees and to HRSA

Defining “Severity of Need”

HRSA/HAB defines severity of need as follows:

> The degree to which providing primary medical care to people with HIV disease in any given area is more complicated and costly than in other areas based on a combination of the adverse health and socioeconomic circumstances of the populations to be served.

SON Development History

- IOM* suggested specific areas of inquiry
  - Disease burden
  - Area demographics and economics characteristics
  - Differentials in costs of care
  - Differentials in medical insurance coverage

* Source: Measuring What Matters: Allocation, Planning, and Quality Assessment for the RWCA, 2004, Institute of Medicine, Washington, DC

Implementation of IOM Recommendations

- Goal: Implement the broad SON recommendations of IOM
- Conceptual Framework
  - Assess the severity of need for Ryan White programs and services
  - Distribute the funds according to quantifiable measures
- Contract – awarded 9/2005
  - HSR Inc., and Altarum Company—Skilled in facilitation and eliciting expert opinion
  - RTI International—Skilled in technical analysis and forming policy from a wide range of input
- Creation of DHHS Collaborative Council on SON

SONI Conceptual Framework

SONI Collaboration – Departmental collaboration with key agencies, national experts, grantees, and consumers toward the development of a Severity of Need Index (SONI)

- Structure of the SON Collaboration
- Process
- Participants

Accomplishments

- 4 panels, 47 panelists, 5 contractor staff
- More than 100 workgroup panel calls
- Consideration of at least 56 variables, with many more issues discussed
  - 19 variables forwarded for consideration in an index
  - 21 variables identified as important but lacking sufficient data
  - 16 variables eliminated

Index Criteria and Sources of Information

- Criteria for inclusion
  - Measured in all jurisdictions
  - Regularly updated
  - Measured consistently across jurisdictions
- Items in index have very strong data
  - Centers for Disease Control and Prevention (CDC)
  - Bureau of Labor Statistics (BLS)
  - Department of Housing and Urban Development (HUD)
  - Social Security Administration (SSA)
  - U.S. Census

SON Index

{ (**Total Cases** **- Federal Insurance Reduction**) X **Geographic Cost Index** }

- Labor
- Facility/rent

+ { **Indirect Measures of Need**

- Prevalence rate
- % population <100% FPL
- Death among people diagnosed with AIDS over past 5 years / average # reported living with AIDS over past 5 years }

Direct Adjustment

- Impact on costs can be estimated

Indirect Adjustment

- Impact on costs is expected but not directly estimated

Direct and Indirect Measures of Need

- Direct Measures
  - Impact of measure on costs can be directly estimated
    - Example: Medical costs
- Indirect Measures
  - Impact of measure on costs is expected, but insufficient data exist to estimate its exact impact
    - Example: Poverty
  - Outcome indicators of program performance
    - Example: Death rate

Index Components: Rationale

Component	Rationale
Cases	• Need is direct function of the number of people who require care
Federal Insurance Reduction	• Federal government already pays a portion of HIV/AIDS costs through Medicare and Medicaid
Regional Costs	• The cost of medical services varies across jurisdictions
Poverty	• Areas with high poverty may have inadequate infrastructure for HIV/AIDS care • Patients themselves may be poorer and more needy
Death Rate among People with AIDS	• Direct indicator of higher need • OMB PART performance measure
Prevalence Rate	• Areas with high prevalence rate shoulder a disproportionate burden per uninfected person

Index Components: Measurement Proxies

Component	Need Factors Captured
Cases	• Reported living HIV and AIDS cases
Federal Insurance Reduction	• Medicare/Medicaid enrollment • Medicare/Medicaid benefit adequacy • Federal share of total Medicare/Medicaid payments • Proportion of Ryan White funds devoted to medical services
Regional Costs	• Differences in medical labor costs • Differences in regional rent costs
Poverty	• Lack of insurance • Poor access to medical services • Racial and ethnic disparities • Higher than average substance abuse rates
Death Rate among People with AIDS	• Lack of access to timely medical care • Patients with longer durations of infection • Resistance to antiviral therapies • Untreated substance abuse
Prevalence Rate	• Burden per person of area population

Index Components: Data Sources

Item	Description /Source	Year	Status
Cases	• AIDS + HIV • CDC reported living HIV & AiDS Cases • HRSA reported code-based HIV Cases reduced by 5%	2005	Complete
Geographic Costs	• Medical staff wages from BLS • Rent values from HUD	2006	Complete
Federal Insurance	• SSA estimate of the number of people with SSI, SSDI, or both as a result of an HIV/AIDS diagnosis • Information on Medicaid, Medically Needy eligibility • Information on special Medicaid enrollment programs	2006	Interim values
Death Rate	• Deaths over a 5-year period divided by the total life years lived by people with AIDS only in that same period • Provided by CDC	2001–2005 time period	Complete
Poverty	• Average percentage of population below 100% of FPL, past 5 years • U.S. Census	2006	Complete
Prevalence	• Number of cases / total population	2005	Complete

Components of Federal Insurance Reduction

- Proportion of Ryan White program resources devoted to medical services
  - 76.2% - From Part A reports
- Proportion of costs paid by the Federal Government
  - Medicare – 100% (after adjusting for premium and co-pay)
  - Medicaid – Federal Medical Assistance Percentage (FMAP)
- Benefit adequacy (with respect to medical services)
  - Medicare
    - Annual premium ($1,062)
    - 20% patient outpatient co-pay
  - Medicaid
    - Average annual reimbursement for patient on disability

Components of Federal Insurance Reduction

- **Medicare enrollment** = Number of people with a disability code for HIV/AIDS who have received SSDI benefits for 24 months or more.
- **Medicaid Enrollment** = Number of people with an SSI disability code for HIV/AIDS + estimated adjustments to cover enrollment expansion waivers.
- **Federal insurance reduction** i = Estimated Medicare Enrollees i x Medicare Adequacy Measure i + Estimated Medicare Enrollees i x Medicaid Adequacy Measure i x FMAP i
- **Ideal care**
  - $27,821 (Shackman, 2004)
  - Adjusted for inflation
  - Adjusted for variation in regional costs
- **Adequacy Formulas:**

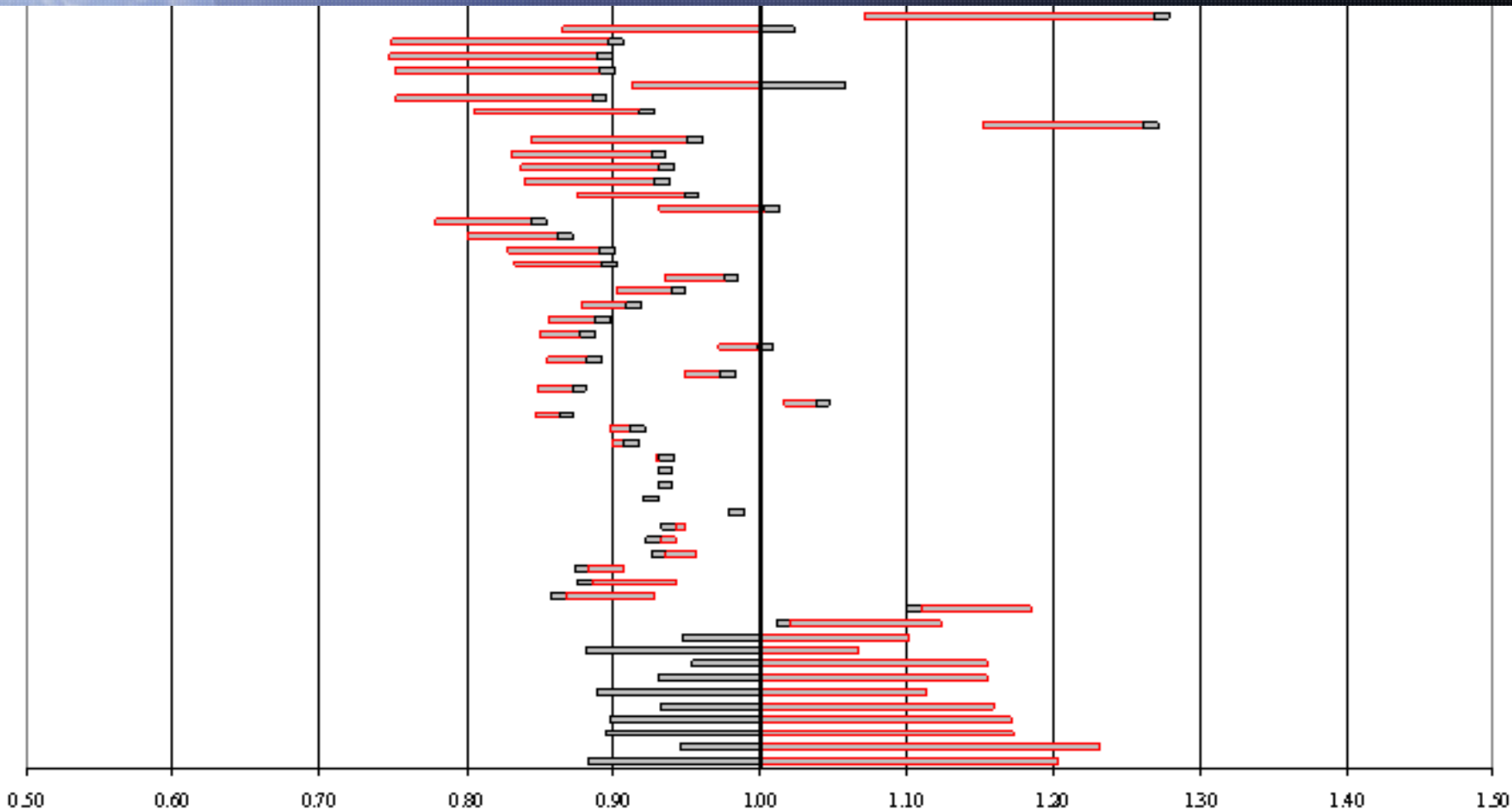
$$Medicare\ \ Adequacy_i = \frac{(\$Ideal\ \ Care_i - \$1{,}062) \times 0.80}{\$Ideal\ \ Care_i}$$

$$Medicaid\ \ Adequacy_i = \frac{\text{Average annual payment per disabled enrollee}_i}{\$Ideal\ Care_i}$$

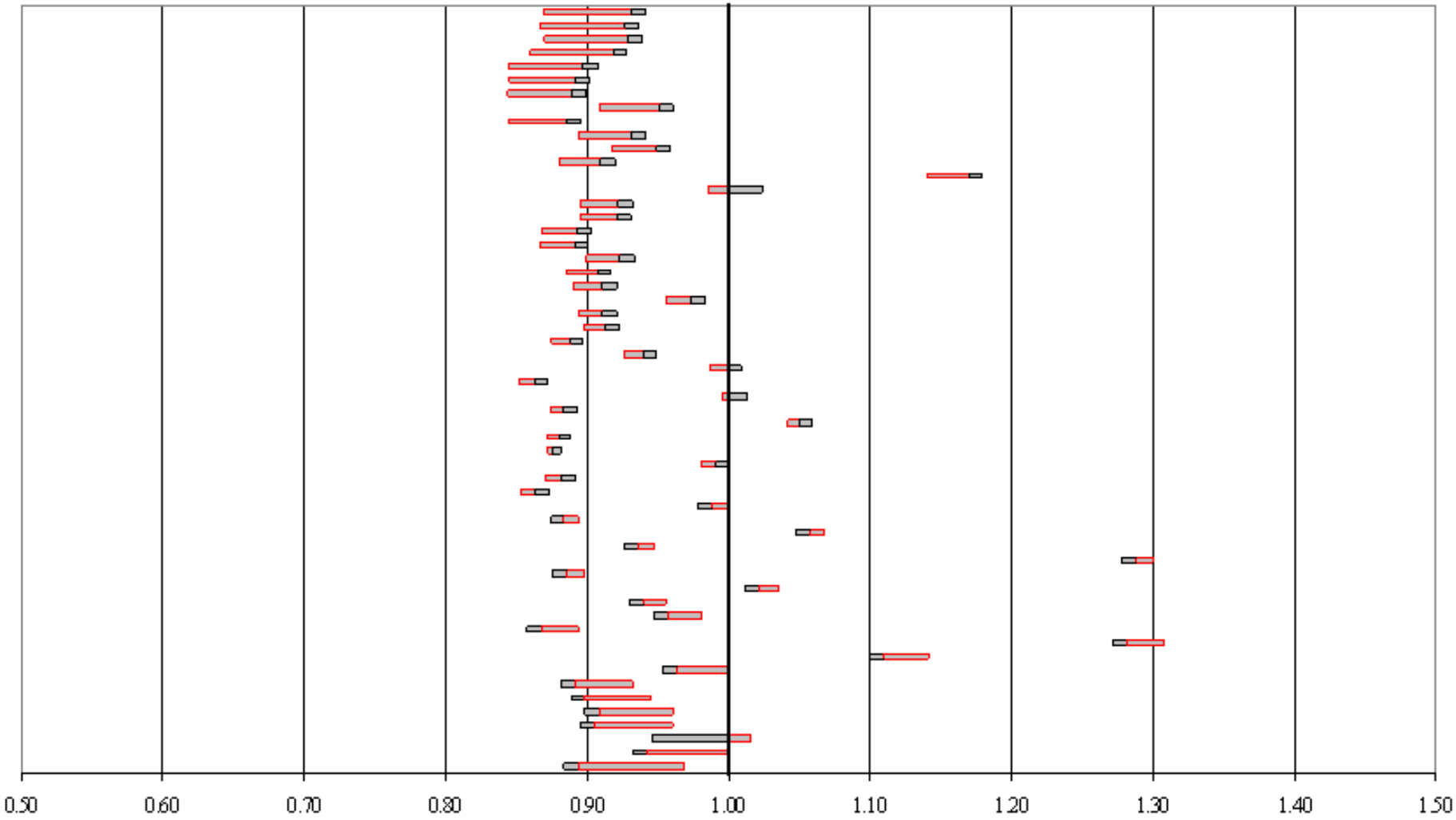
Explanation of Graphs

- Figures
  - The center axis equals 1.00 and always represents an equal distribution of funding based solely on the number of cases in each area
  - Award amounts are shown as a proportion of per capita funding
- When an area's allocation changes from below average to above average (or vice versa) under SON, then in the figures
  - Gray represents the reversion toward 'per capita' funding
  - Red represents the additional impact of SON
- When an area starts and finishes on the same side of per capita funding before and after SON, then in the figures
  - Gray represents the value of funding prior to SON
  - Red represents the direction SON moved funding

SON Applied to Formula and Supplemental

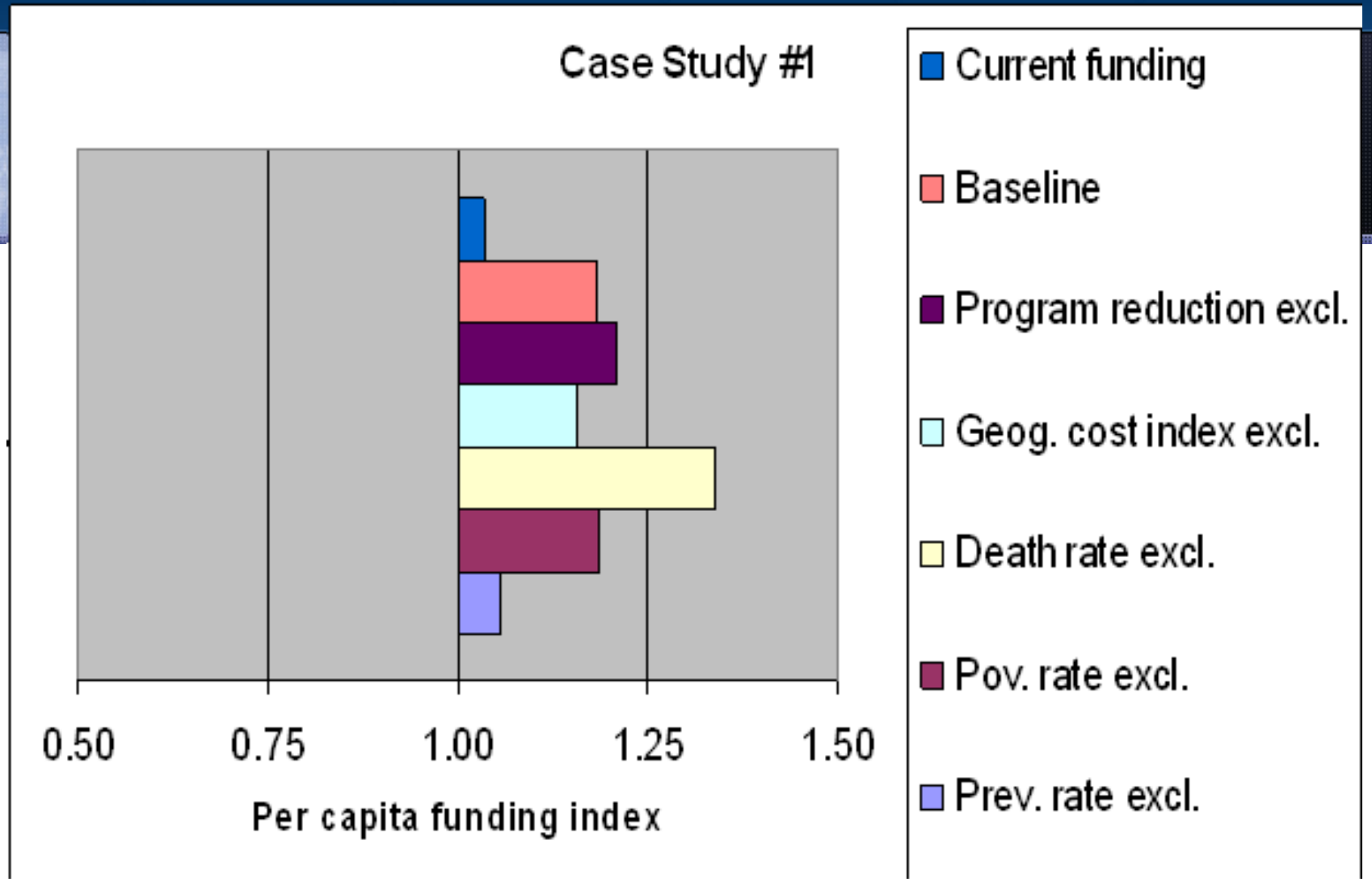


SON Applied to Supplemental Only



What Drives the Index? (Sensitivity Analysis)

- 5 case studies
  - Exclude federal insurance reduction
  - Exclude geographic costs
  - Exclude death rate
  - Exclude poverty rate
  - Exclude prevalence rate
- Does the index behave as anticipated?
- Does the index adjust for differences in need?

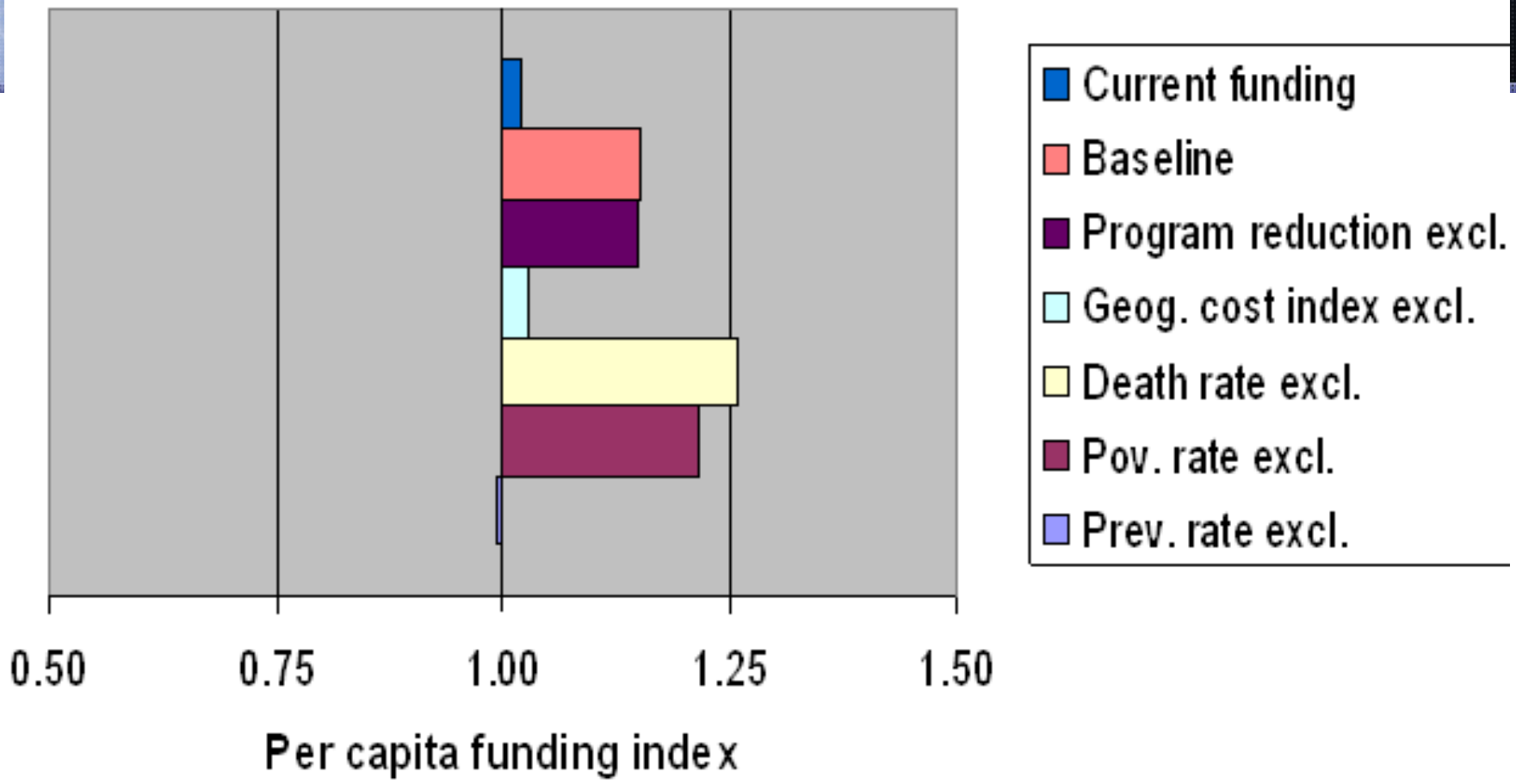


Case Study #1 has an extremely high prevalence rate, high poverty, and slightly above average costs. It has the highest program reduction value, and a slightly below average death rate.

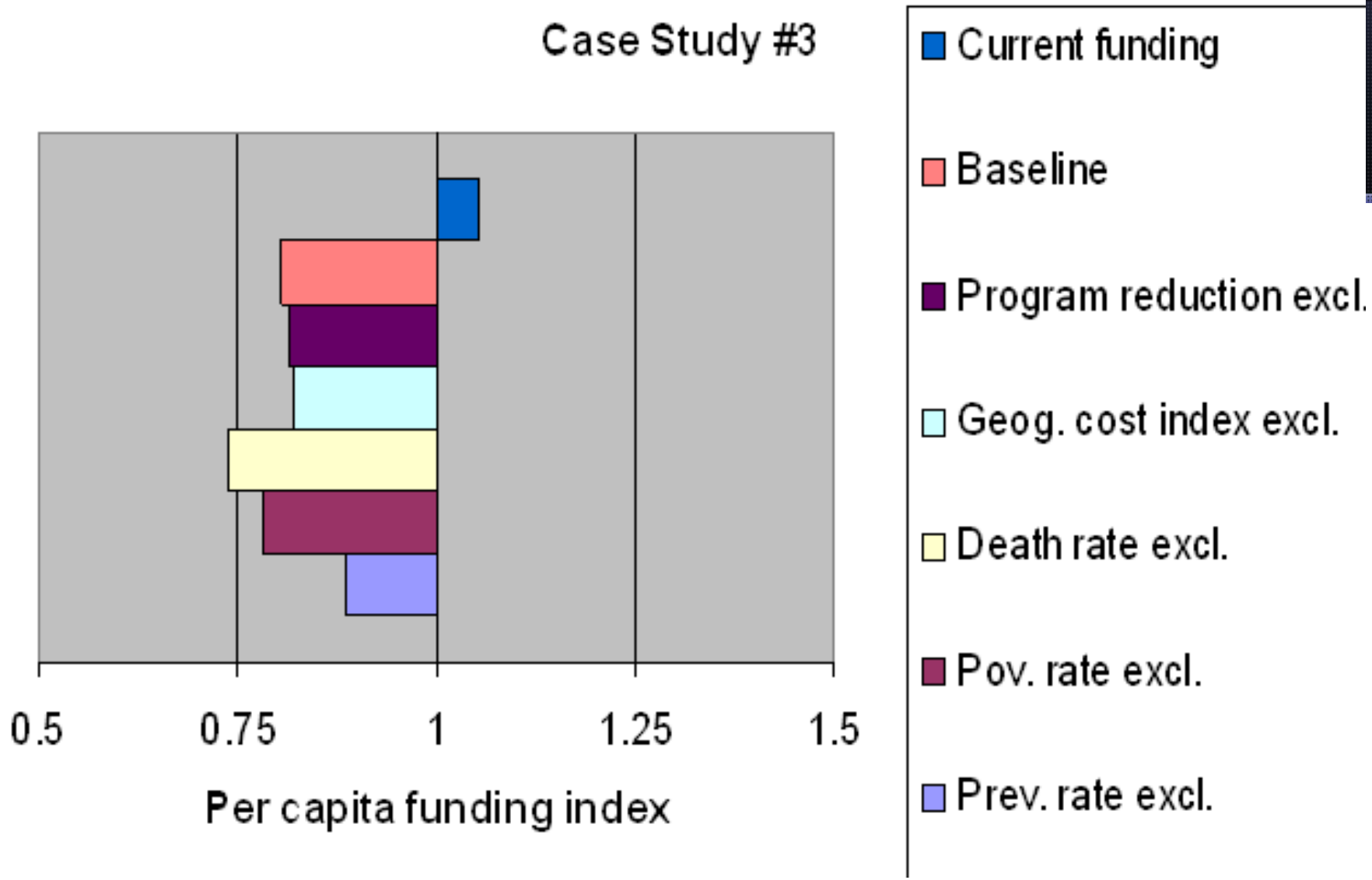
-When death rate is excluded, the impact of prevalence is increased.

-Program reduction has only a small impact.

Case Study #2

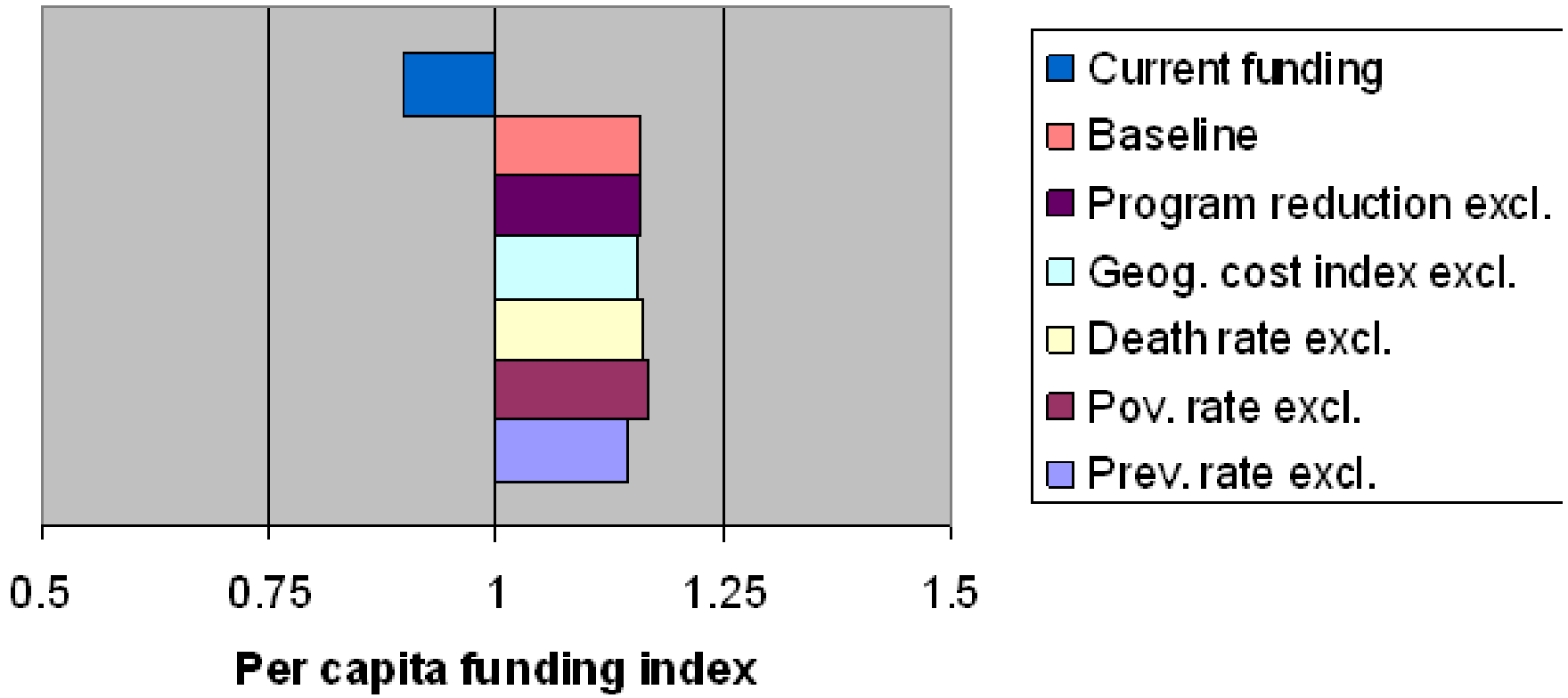


Case Study #2 has very high medical costs and very high prevalence. It has substantially lower than average poverty and death rates.
-Excluding medical costs or prevalence dramatically reduces allocations.
-Excluding death rate or poverty leads to greater allocations.
-Again, excluding program reduction has very little impact.

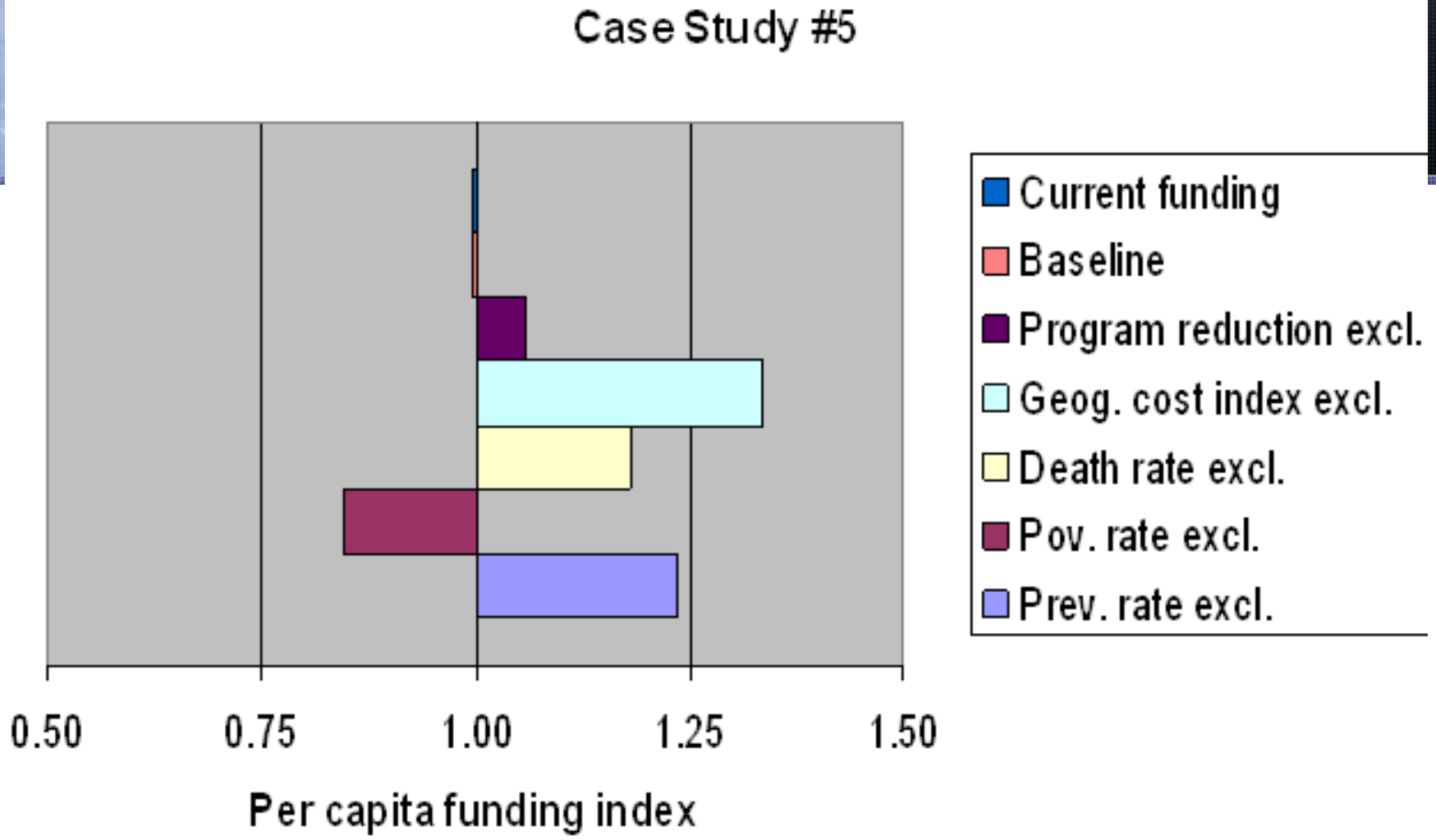


Case Study #3 has average costs, higher program reductions than average, lower than average poverty and death rate, and extremely low prevalence relative to other areas. It loses resources under any possible version of a SON index.

Case Study #4



Case Study #4 has average costs and higher than average death rates, poverty, and prevalence. Because the relative severity of death rates, poverty, and prevalence are approximately equal, and because they have average costs, It's allocations remain stable across a wide range of index choices.



Relative to other areas, Case Study #5 has extremely low costs and extremely high poverty. It's death rate and prevalence are moderately above average and it loses virtually no cases from the program reduction variable. The net effect of this off-setting impacts of costs and poverty resulting in virtually no effect of the SON index.

Development Choices

- Measures themselves are scientific
- Choices about how to construct the index affect the impact
- We chose a methodology that was sensitive to differences in need but avoided extreme redistribution of funding
- Prioritization was based on rational consideration of the evidence
- Each factor's magnitude of importance was evaluated

Decisions Made

- Additive rather than multiplicative
  - *Multiplicative allows any one extremely high or extremely low value to dominate the index. Because the actual impact of indirect measures is unknown, additive allows the impact to be more easily controlled*
- 50% direct, 50% indirect
  - *No evidence that one is more important than the other*
- Indirect measure developed based on weights, with 50% to the death rate and 25% to poverty and prevalence
  - *Death is the ultimate failure of access to care, therefore its weight is double the weight of the other measures*
- Index applied to Part A Supplemental funding only
  - *Implementation will be incremental, starting with Part A Supplemental since SON has been part of it since 1996*

Conclusions

- Developed an index that incorporates input from
  - Academic experts
  - Grantees
  - Federal Staff
- Measures are scientifically driven, transparent, and reproducible
- Future refinements of the SON Index will be based on new scientific evidence
- Index appears to have face validity, fulfills congressional requirements, and includes different factors and components whose weights can be modified to fit different aspects of the Ryan White HIV/AIDS Program

Next Steps: Refining, and Assessing the Model

- Gather community input from:
  - Government stakeholders
  - Grantees
  - External constituencies
- Utilize feedback and discussion to refine the SON Index
- Conduct an external independent review of the SON Index
- Address operational considerations
  - Assess HAB capacity
  - Secure data agreements

Next Steps: Communicating the SON Index History and Process

Web Site Contents

- **Main Menu**
- **Overview Documents**
  - Project Overview
  - Executive Summary
  - Briefing Document
- **Project Reports**
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- **Panel Reports**
  - Area Characteristics
  - Patient Characteristics
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  - Grantee Meeting
- **Resources**
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Next Steps: Implementing 2006 Reauthorization

Secretary's Report to Congress on the SON Index:

- To be developed by September 30, 2008
- To be applicable across all Parts, although different factors or sets of factors may be used across Parts
- Report to include:
  - Methodology and rationale for development of the index
  - An independent contractor analysis of the index
  - Information regarding the process for obtaining community input on the application and development of the index
- If the index is not completed, the Secretary must submit an annual report outlining progress toward completion of the index