Budget Impact Analysis for Implementation Projects

Selected slides from the presentation of the same name presented by Dr. Rebecca Raciborski, PhD at the QUERI Adjunct to the 2023 AcademyHealth Annual Research Meeting in Seattle, WA on 6/27/2023.

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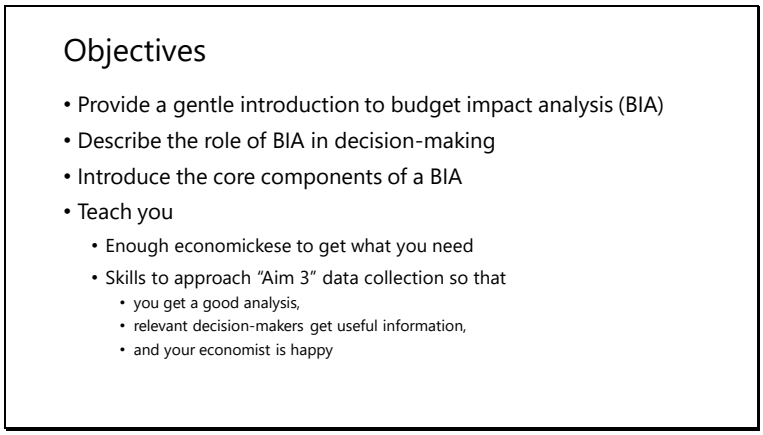
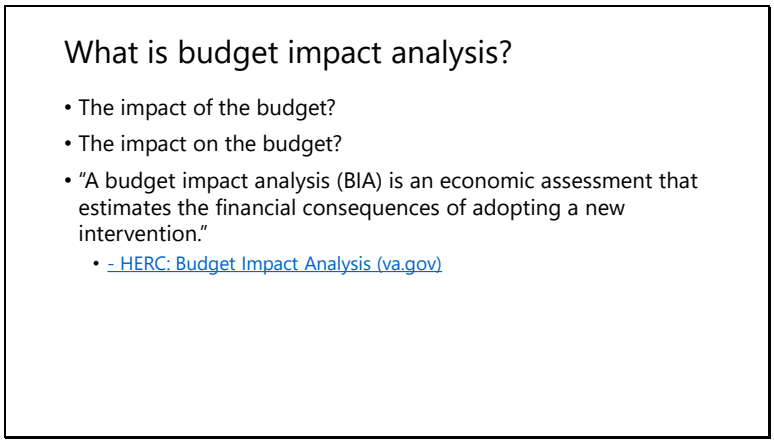
- Views are hers and do not represent official policy of the Department of Veterans Affairs or QUERI
- Dr. Jacob Painter provided an early version of these slides
- Drs. Bo Kim and Sara Landes noted insightful ways to make the presentation more useful to implementation scientists
- All errors are the presenter's



This presentation is designed to introduce implementation scientists to fundamentals of BIA

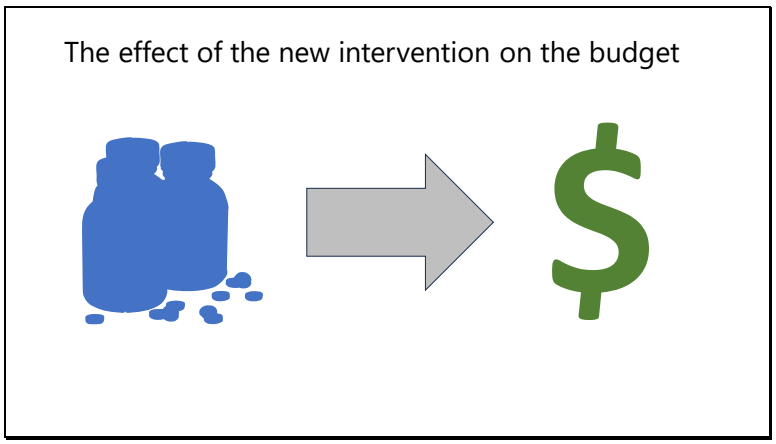
It assumes you will either be (1) working with an economist from the beginning of your project or (2) getting set up on your own but eventually having an economist or other analyst complete the BIA

In short, it is not designed to teach you how to do a BIA!



"Budget impact" may be confusing because it is not clear what is being affected and what is causing the effect

It is the budget that is being affected by changes in care

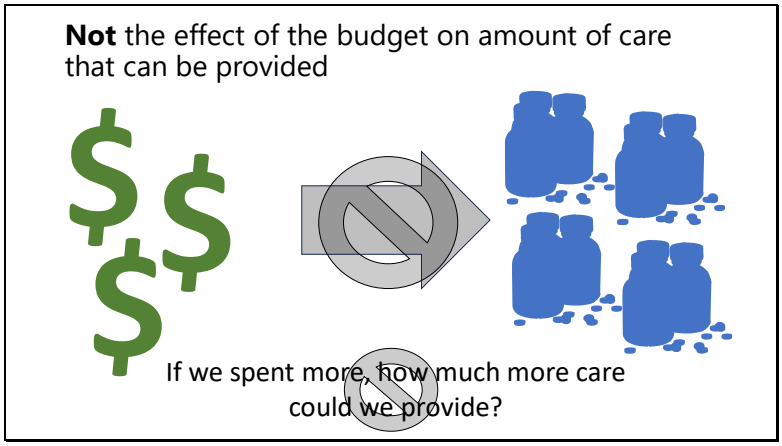


Imagine a new diuretic to treat hypertension during comes on the market; unlike some existing drugs, this can be used during pregnancy

How does this change how much VA pays for hypertension care?

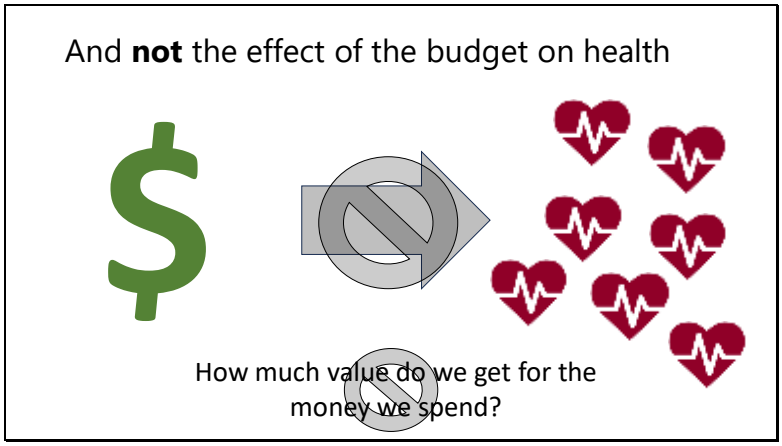
- Brand & not generic
- Lower pregnancy complications could offset cost

A BIA could tell us how much the cost of the new drug was offset by the savings from fewer healthcare encounters for complications.



We don't use BIAs for questions about how much care we could provide if we increased the budget.

For example, we couldn't use BIA to ask a question about how many more people we could treat with the new drug if we increased VA's budget by $10 million.

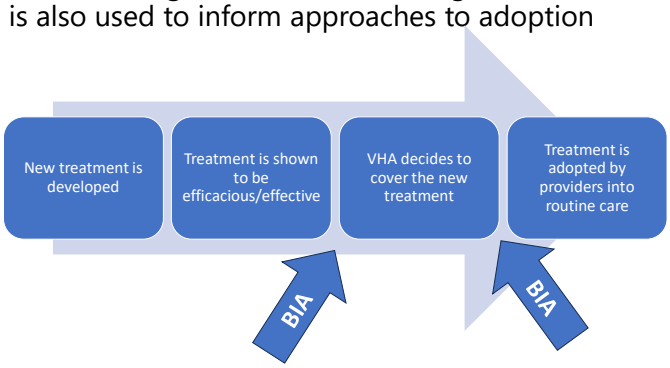


We also don't use BIAs for questions about how our spending affects health.

For example, we couldn't use BIA to answer a question about how many more people have their blood pressure under control given the $500,000 we spent on the new medication in the last year.

Cost-effectiveness analysis is used to answer questions about *value*.

BIA was designed to inform coverage decisions but is also used to inform approaches to adoption



Typically think of BIA as happening before a payer (VHA) decides to pay for the treatment – that is, it informs the coverage decision

May also be used in adoption decisions:

- How to implement
- Whether offering an effective treatment appears to be sustainable
- How many patients can feasibly be covered per budget cycle given current constraints

BIA is used to determine if an intervention is <u>affordable</u>

- Use a BIA to inform decisions about whether the organization can afford to
  - Implement an intervention into clinical care
  - Sustain adoption once implemented
- BIAs may also help plan how much funding is needed to comply with mandates
  - When multiple pathways to compliance are available, BIA can help choose the most affordable option
  - Alternately, can choose which patients will have access given limited budgets

Mandates can be Congressional or from national VA to local VAMCs

There are 6 core building blocks of a BIA

- Perspective – who pays?
- Time horizon – how long do we compute a forecast for?
- Target population – which patients are eligible to get the treatment?
- Treatment mix – how are patients being treatment now? how do we expect them to be treated in the future?
- Treatment cost – what are the costs now? how do we expect those costs to change?
- Condition-related costs – what other costs are associated with the patient's disease?

Focus is on cost incurred by whoever pays for the new intervention ("payer" or "budget holder")

In VA, the payer could be VACO, a specific program office, or even a VISN or VAMC if an intervention is implemented with local funds

Time horizon for projections is generally short to align with budget cycles and planning periods

Notice how implementation costs are missing?

"Classic" BIA focuses on 2 cost buckets

- Treatment & treatment-related costs
  - The new treatment itself
  - Current alternatives to the treatment
  - Medical care for any adverse events
  - Any necessary charges associated with obtaining treatment (e.g., dispensing fees)
  - Training to administer treatment correctly
- Condition-related costs
  - Other costs associated with the disease

Implementation projects pose special challenges

- There is no price for implementation activities
- Implementation extends across budgetary periods, making allocation to "Year 1", "Year 2", etc challenging
- Implementation strategies are highly customized to the setting
- Fidelity to the intervention can affect outcomes
- Implementation often focuses on interventions that fit into a complex "bundle" of care

Not either/or; it is "and" – or changing how the same services are provided

Economists need implementation teams to help solve the cost data challenge

- Microcosting - each activity gets a cost
  - Need a set of defined activities *before* beginning implementation
  - Log time in Excel, Access, REDCap, or other standardized tool
  - Time is given a value based on the wages of the person completing the activity
  - Amounts are summed up to create a cost
- Macrocosting – cost is based on effort allocation
  - Each person's FTE for implementation is given a value based on the wages
  - Total implementation FTEs are summed

We use microcosting when we need detail about how much different strategies cost

We use macrocosting when we need only to know how much implementation costs

Other things you can do to make data collection & economic analysis easier

- Meet with your economist early!
- For new interventions, set up unique codes to locate records in the clinical data warehouse (CDW) with one or more of these:
  - Clinic stop codes
  - CHAR4 codes
  - Standardized note titles
- Digitize your logbooks
  - Several options exist
    - HERC's list of tools and resources for conducting economic analyses for implementation research (https://www.herc.research.va.gov/include/page.asp?id=implementation-tools-resources)
- Collect data throughout the project and from all sites

To wrap up

- Budget impact analysis:
  - Estimates financial consequences of an intervention
  - Is used to decide whether an intervention is affordable
- If you know your intervention is (cost-)effective, one key question to answer is the affordability of implementing it
- BIA can support implementation by providing this evidence
- You, the implementation researchers, are an important part of making BIA results useful for policy makers

"Learning To Internalize The Good"

- New evidence-based manualized self-acceptance intervention
- Clinically efficacious way to improve patients' self-assessed quality of life
- Successful completion significantly associated with lower blood pressure
- Researchers speculate that, long term, a significant number of strokes and heart attacks will be prevented
- LEarning To Internalize The GOod (LET IT GO)

Hypothetical example intervention

But there's a catch…

- LET IT GO must be administered with fidelity to achieve health goals
- Behavioral Health QUERI researchers are implementing LET IT GO in 10 pilot sites
- If the implementation is successful, VACO will provide funding to any VAMC that wants to adopt LET IT GO locally
- To implement LET IT GO, 3 implementation strategies are used:
  - Develop educational materials (pre-implementation)
  - Conduct educational outreach visits (4 total)
  - Audit and provide feedback (1 year)

Which best describes what we need to analyze?

A.
Budget impact of implementation

- We want to know the budget impact of our strategies to implement LET IT GO
- Implementation strategies are the "treatment" applied to health care settings

B.
Budget impact of the treatment

- We want to know the budget impact of LET IT GO
- Implementation is just one component of larger cost changes for a treatment offered to patients

Ask your economist for the budget impact of the implementation – VACO needs to know how much it will cost to pay for implementation.

What is the budget impact of providing implementation support for a new VAMC?

- Why did we pick this question?
  - VACO leadership needs to know how much it will cost to provide funds for implementation at non-pilot VAMCs
- What are the key features about this implementation project?
  - VACO will pay for future implementations
  - We have 10 sites in our sample
  - We 3 implementation strategies

In this case VACO is the payer because they will be funding future implementations

The BIA will be done from VACO's perspective

Needed or Not Needed for BIA?

Component	Needed	Not Needed
Salaries of implementation staff	✓	
Time spent developing new training materials		×
Number of handouts given out during trainings	✓	
Printing costs	✓	
Time spent delivering educational meetings	✓	
Who attended each meeting	✓	
Time spent developing audit and feedback system		×
Time providing feedback	✓	
Diffusion of LET IT GO into clinical care		×
Number of Veterans successfully treated		×
Blood pressure		×
Heart attack hospitalizations		×

Several of the items on this list are of interest to researchers, but not necessary for a BIA from VACO's perspective for this scenario:

- Development costs could be interesting if we want to know pre-implementation start-up costs, but because these are paid for by the grant and won't be "paid" again, we do not need them in this example
- Diffusion is interesting as a measure of reach and "successful" treatment (finishing all sessions) as a measure of effectiveness may be important RE-AIM metrics, but not used in BIA
- Specific health outcomes are not in a BIA, only short-term changes in use leading to changes in health costs

For the site-specific items we do collect, we want to make sure to get data at all sites across the implementation timeline

But there's a catch…

- LET IT GO must be administered with fidelity to achieve health goals
- Behavioral Health QUERI researchers are implementing LET IT GO in 10 pilot sites
- If the implementation is successful, VHA will endorse LET IT GO for enterprise-wide adoption, but local facilities will have to decide if they can afford it
- To implement LET IT GO, 3 implementation strategies are used:
  - Develop educational materials
  - Create a learning collaborative (virtual community of practice)
  - Conduct educational meetings (show trainings at grand rounds)

Alternate scenario for our exercises – new decision maker & strategies

Which best describes what we need to analyze?

A.
Budget impact of implementation

- We want to know the budget impact of our strategies to implement LET IT GO
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B.
Budget impact of the treatment

- We want to know the budget impact of LET IT GO
- Implementation is just one component of larger cost changes for a treatment offered to patients

Ask your economist for the budget impact of LET IT GO – a VAMC needs to know how much it will cost to pay for implement and sustain the new treatment

Each VAMC is the payer because the adoption and sustainment decision will be made locally

What is the budget impact of implementing and sustaining LET IT GO?

- Why did we pick this question?
  - A VAMC budget administrator needs to know how much it will cost to implement LET IT GO and continue to offer the treatment once adopted
- What are the key features about this implementation project?
  - VAMCs are responsible for the cost of LET IT GO
  - We have 10 sites in our sample
  - We 3 implementation strategies

Needed or Not Needed for BIA?

Component	Needed	Not Needed
Salaries of national implementation staff		×
Salaries of site-level implementation staff	?	
Time spent developing new training materials		×
Time spent delivering educational meetings		×
Who attended each meeting		×
Time spent developing community of practice		×
Provider time engaging with community of practice	?	
Diffusion of LET IT GO into clinical care	✓	
Number of Veterans successfully treated		×
Blood pressure		×
Heart attack hospitalizations		×

Why aren't the national (central) salaries needed? Because newly-adopting local VAMCs won't be paying these in the future

We may or may not need salaries for local staff – we may choose to use national estimates for job titles because different sites may staff these roles differently

We also may not need to account for time engaging with the community of practice if that is done within a provider's usual continuing education protected time

This time we add diffusion because we need to know what the uptake will be

Why not successful treatment, cost of a visit, or number of visits? Hopefully you got your clinics set up with a way to track that easily using CDW data 😊

Selected resources and references

- https://www.herc.research.va.gov/include/page.asp?id=budget-impact-analysis
- https://www.herc.research.va.gov/include/page.asp?id=implementation-tools-resources
- Cost-Analyses of FUNCTION QUERI Programs: STEP-KOA and STRIDE https://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=6281
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