

# Reviewing the ACHDNC Process for Evaluating Conditions Nominated to the RUSP

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Presented to the Advisory Committee on Heritable Disorders in  
Newborns and Children

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# Objectives

- Inform the ACHDNC about ways to strengthen the decision-making process and develop a future manual of procedures
- Developing consumer-friendly material to help others understand the process and outcomes of ACHDNC decisions



# Steps to a recommendation

- Nomination process
- Evidence Review
  - Systematic evidence review
  - Decision modeling
  - Public health system impact assessment
- Deliberations
  - Guided by the decision matrix
- Recommendations
  - Communicating with stakeholders

Quality?

Costs?

Values?

Matrix?



# March 2019 Expert Advisory Panel

- Review the updates to the RUSP for lessons learned that could inform the process
- Consider the process
  - Nomination
  - Systematic Evidence-based Review Process
  - Decision Making
  - Post-recommendation reviews

# Approach and Timeline through May 2021

- Systematic-evidence review (April 2019)
- Recap of the progress (Aug 2020)
- Considerations regarding values assessment and using this in the recommendation process (Aug 2020)
- Assessing values – recommendations, decision-making criteria/matrix/recommendations (Nov 2020)
- Process for reviewing conditions on the RUSP (Feb 2021)
- Nomination process (Feb 2021)
- February/May 2021: Overview of recommendations for the future

# The Review Process: Four Focus Areas

1. Nomination
2. Review Process
3. Decision Matrix
4. Review of Current Conditions on the RUSP

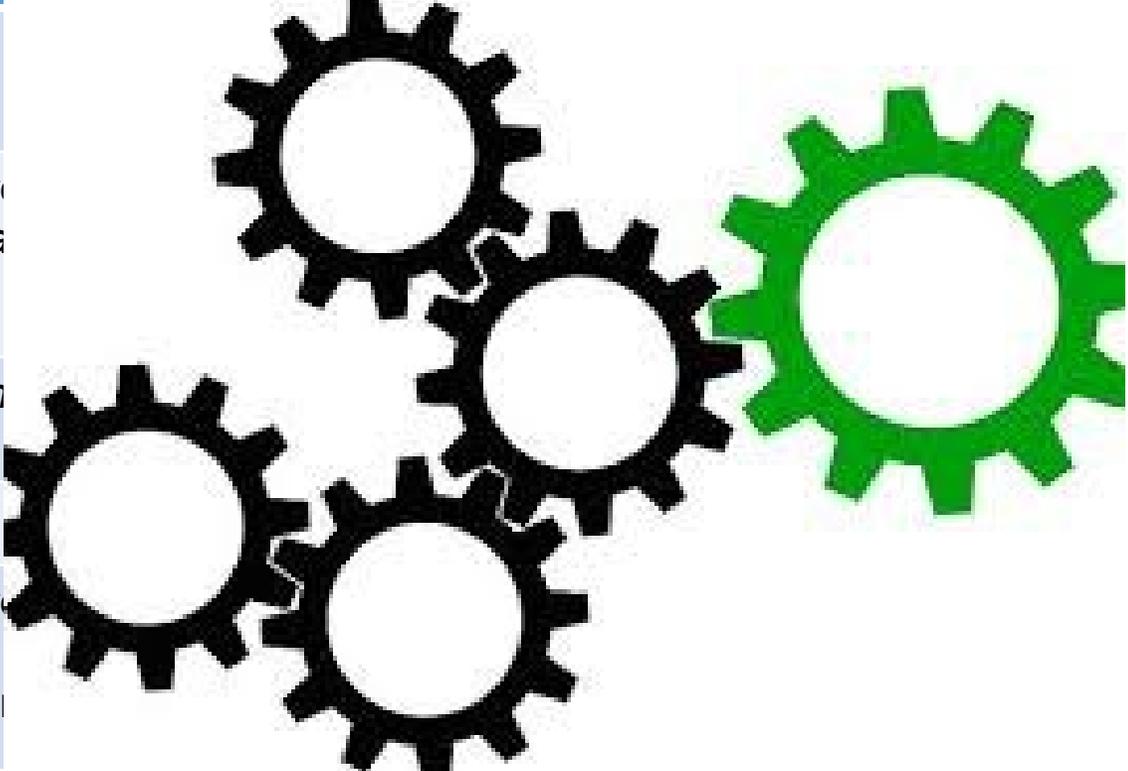
# Steps in Evolution of the Evidence Review Process

- Case definitions
- Outcomes measures
- Treatment/intervention
- Grading the evidence
- Identifying and synthesizing unpublished evidence
- Cost assessment
- Population-level modeling
- Public health system assessment
- Assessing values

# Evidence Review Goals to Facilitate ACHDNC Decision-Making Process

- Evidence for Clinical Effectiveness/Net benefit to the Individual/Family
  - ✓ Magnitude/Strength of Evidence
  - ✓ Certainty of Evidence
  
- Public Health Impact - Population
  - ✓ Net benefit to the Population
  
- Public Health Impact - System
  - ✓ Feasibility and Readiness to Expand Screening
  - ✓ Cost of Expanding Screening

# Condition Review - Target Timing by Component

CR Components	Description	Main Information Sources	Timing									
												
Systematic Evidence Reviews (SER)	Net benefits of early detection, diagnosis, and treatment on individual	Published literature <i>Pilot programs/State</i>										
		<i>Grey literature, Unpublished evidence</i>										
		<i>Analysis</i>										
Public Health Impact – Population	Net benefits of newborn screening on population-level health	Published literature outcomes Decision analysis										
Public Health impact – NBS system	Feasibility of population-based screening, Readiness of states to expand screening	Screening procedures Survey of all NBS programs Interviews with states screening/mandated			X	X	X	X	X			
		Costs to expand screening			X	X	X	X	X	X		

# Decisions

- Case Definition – will be streamlined with a more focused approach and aligned with the target of screening
- Key Outcomes – health and quality of life; will include standard, common outcomes as well as condition-specific outcomes to be identified at the start of the review process
- Key Treatments – Drug and non-drug, specific and non-specific
- Time Horizon – At the start of the review process, the available time horizon will be presented to the AC liaisons

# Decisions

- Evidence Summary – Quality appraised by article and across each key question
- Grey Literature – Criteria for inclusion better specified and a plan to have investigators supplement what is available within an abstract

# Modeling Challenges

- Understanding availability and type of evidence on the condition before the evidence review (published, grey lit, none at all)
- Systematic method for including and assessing unpublished or expert-derived evidence is needed

# Strategies for Modeling

- Improving transparency
  - Model development
  - Summary tables of studies used in model
    - Ratings of study quality/risk of bias
    - Time horizon/follow up period
- Ongoing and active communication with the ACHDNC
- Consider foregoing modeling if the evidence base is insufficient

# Challenges related to the Public Health System Impact Assessment

- Difficult to have granular data regarding the barriers and facilitators of screening for a new condition within newborn screening programs
- No direct assessment of the impact on primary care and specialty physicians, genetic counselors, and other health care providers
- NBS programs often not able to comment on long-term follow-up issues
- Funding problems are pervasive
- Questions are often theoretical
- OMB process limits what can be done

# Update to the Public Health System Impact Assessment

- Revised survey
  - Developed at the time of the OMB renewal

## PHSI Survey (v 1.0, exp 9/30/2018)

How long would it take to achieve the following **assuming** that condition x was added to your state NBS panel and funds were allocated...?

- 1 yr or less
- Years
- 2 to 3 years
- 3 or more years

- Obtain and procure equipment for screening for [condition x]
- Hire necessary laboratory and follow-up staff
- ~~Consult with medical staff and specialists~~
- Select, develop, and validate the screening test within your laboratory  
*IF you ARE/are NOT multiplexing*
- Add the screening test to the existing outside laboratory contract
- Pilot test the screening process within your state, after validation has taken place
- Implement statewide screening for all newborns, including full reporting and follow-up of abnormal screens after validation and pilot testing
- ~~Entire process from obtaining equipment to implementing statewide screening (assuming that some activities may occur simultaneously)~~

## PHSI Survey (v2.0, exp 11/30/2021)

10. Please estimate the time it would take your NBS program to initiate screening for [condition x] in your state (i.e. get authority and funds to screen for condition x, go through administrative processes, meet with your state NBS committees and complete all activities needed to implement and commence screening for all newborns in your state).

- 12 months or less
- 13 to 24 months
- 25 to 36 months
- 37 to 48 months
- More than 48 months

11. The question above related to the overall timeline..... Please estimate the total time needed, in general, for each individual activity listed below within your NBS program.

- Obtain authorization to screen for condition x
- Availability of funds to implement screening for condition x
- Meet with Advisory committees and other stakeholders
- Obtain and procure equipment for screening for [condition x]
- Hire necessary laboratory and follow-up staff
- Select, develop, and validate the screening test within your laboratory IF you are NOT multiplexing
- Select, develop, and validate the screening test within your laboratory IF you ARE multiplexing
- Develop a screening algorithm, follow-up protocols, and train follow up staff
- Set up reporting and results systems for added condition (e.g., LIMS)
- Collaborate with specialists and clinicians in the community to determine which diagnostic tests will be recommended upon identification of an out of range NBS result
- Add the screening test to the existing outside laboratory contract
- Conduct an internal validation study for [condition x]
- Pilot test the screening process within your state, after validation has taken place
- Implement statewide screening for all newborns, including full reporting and follow-up of abnormal screens after validation and pilot testing

# Cost Challenges

- Cost estimates need to be both internally valid and generalizable across states
- Which costs are most important, how should they be measured, and how should that information be communicated?
- Follow-up costs (short-term monitoring, treatment) are not included in PHSI
- Cost assessments do not account for director effort, quality control, contractual issues with upgrading equipment, and different levels of support from NIH and other sponsors

# Cost Challenges



# Potential solutions and recommendations

- Consistently frame cost assessment questions (what costs should be included, personnel, effort, rentals, etc.)
- NBS pilot studies should report costs using the same cost categories
- Retrospectively collect cost data from NBS programs that have implemented screening for new disorders
- Analyze actual cost data to predict how costs vary by annual numbers of births in state, number of screens per infant, and annual number of tests performed by screening laboratories
- Whichever approach is used, focus on ranges, thresholds, and consistency

A lot of progress has been made to improve the evidence review process



# Next up (and harder)....Values



*“We’ve changed our minds.  
We do want to be a burden to you.”*