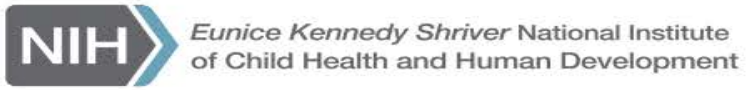
NICHD Director's Report

Diana W. Bianchi, MD
NICHD, Director
June 7, 2018



Presentation Overview

- Budget Updates
  - New projects for FY2018
- NICHD Strategic Planning
- Trans-NIH Pediatric Research Consortium
- Progress Towards Inclusion
- PRGLAC Task Force Update
- Staff Updates

Budget Update

FY 2018 NIH Budget Update

- Government funded through September 30, 2018 with FY 2018 Omnibus Appropriations Act (passed on March, 23, 2018)
- NIH was appropriated $37,084,000,000 for FY 2018, a historic $3 billion increase over FY 2017 (includes Cures Act funding); NICHD's appropriated budget increased by $75 million
- Additional funds to come from special projects

New Trans-NIH Projects in Which NICHD Has a Major Role

NIH HEAL (Helping to End Addiction Long-term) Initiative

- Launched in April 2018
  - As an aggressive trans-agency effort to speed scientific solutions to stem the national opioid public health crisis
- NIH is nearly doubling funding for research on opioid misuse/addiction and pain to $1.1 billion in fiscal year 2018
  - $500 million appropriated in FY 2018 to NIDA and NINDS
  - Dr. Collins was given authority to redirect funds
- Through an internal competitive process NICHD will receive an additional $30 million for a project known as ACT-NOW Act II

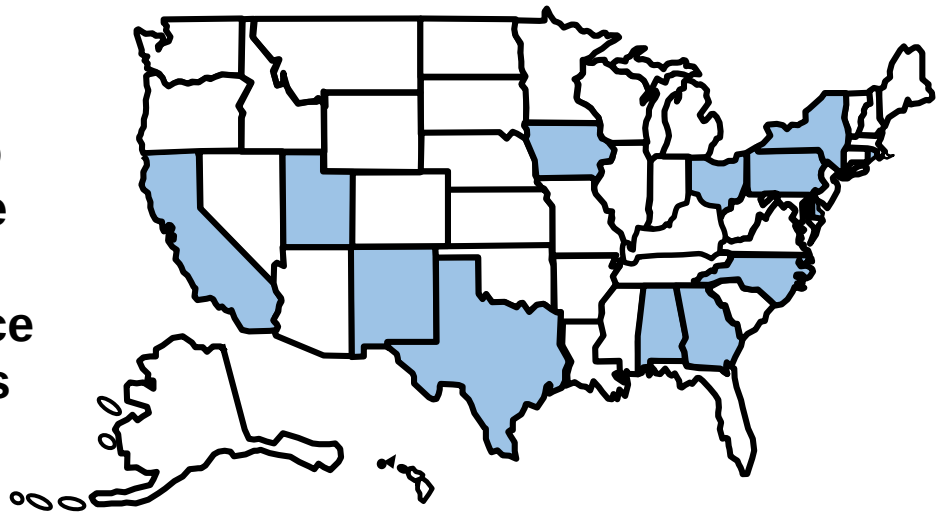
Neonatal Opioid Exposure and Withdrawal

- Need to think about babies differently from adults
  - Pregnant women are not routinely screened for opioids
  - Babies do not die as a result of *in utero* exposure
  - Most babies are born in the hospital and are resuscitated if they do not breathe
  - Not all newborns exposed to opioids develop significant signs of withdrawal right away
- No consistent approaches to care for mothers and babies
  - Current treatments developed for heroin and methadone withdrawal
- Neonates with NOWs utilize resources
  - Occupy a significant number of NICU beds for long periods of time, social services, and local government expenses for foster family placement

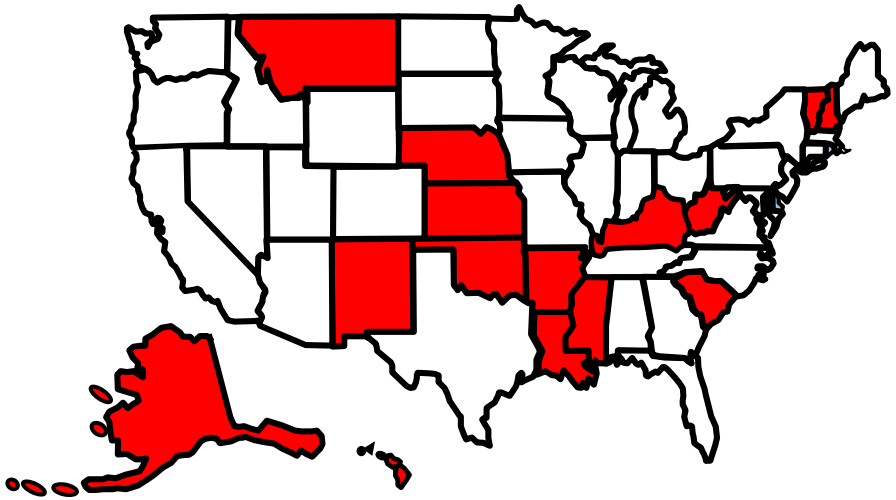
The ACT NOW Partnership: Act One

- Started in 1986
- 15 sites, mainly urban
- Sites do not have high prevalence of NOWs

Neonatal Research Network Centers (2016-2021)



IDeA States Pediatric Clinical Trials Network



- Started in 2016
- 17 sites, many are rural
- Sites overlap with areas of high prevalence of NOWs

<u>Investment to date</u>:

- Received 1 year pilot funding from Director's Discretionary Fund Sept 2017
- 20 clinical sites are participating
- Goals: Assess prevalence of NOWs at different sites
- Understand varied current approaches to treatment (including non-Rx)
- Develop common protocols for future studies

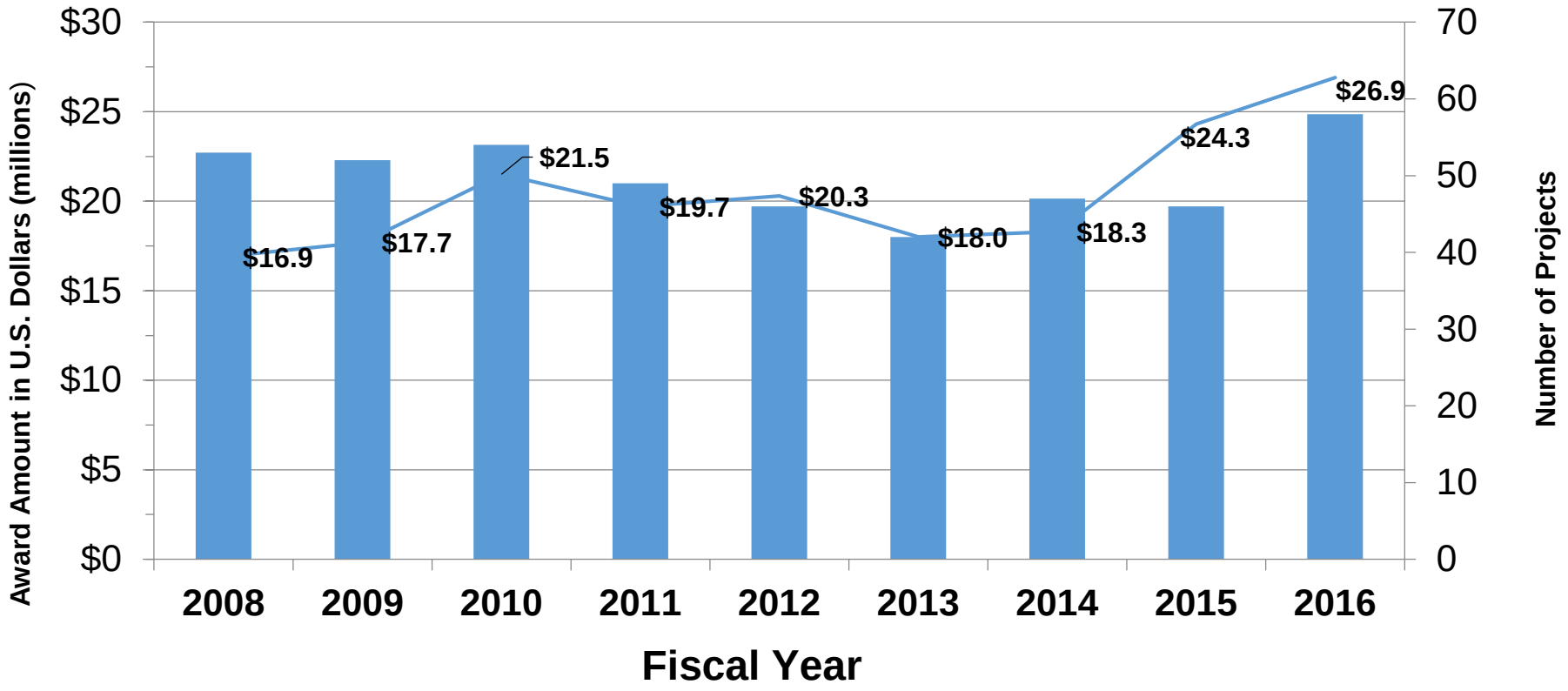
ACT NOW: Act Two

- Short-term
  - Develop a simplified scoring tool to ascertain neonatal opioid withdrawal
  - Determine best practices for clinical care of infants with NOWs
  - Prospective randomized trials to compare:
    - Effectiveness of currently used medications to treat withdrawal
    - Non-pharmacologic strategies (eat, sleep, console) to pharmacologic approaches
- Long-term
  - Rapid evaluation of new pharmacologic treatments as they are developed
  - Developmental and medical outcomes for children prenatally exposed to opioid agonist or antagonist medications
    - Long-term risk for addiction? At higher risk for school performance problems?
  - Effects of fetal and neonatal exposure to potent pain medications on developing brain structure and function

Report Language – Down Syndrome

- “A new trans-NIH initiative involving, at a minimum, NICHD, NIA, and NCI will study trisomy 21, with the aim of yielding scientific discoveries to improve the health and neurodevelopment of individuals with Down syndrome and typical individuals at risk for Alzheimer's disease, cancer, cardiovascular disease, immune system dysregulation, and autism, among others”
- “Funding for this trans-NIH initiative will supplement, not supplant, existing NIH funding levels for Down syndrome research”
- NICHD has had a leadership role in the planning of the InCLUDe study

NIH Funding for Research on Down Syndrome
FY 2008 – FY 2016



FY 2019 Budget Hearing for NIH

- Attended the budget hearing with Drs. Collins, Fauci (NIAID), Sharpless (NCI) and Volkow (NIDA)
- Was asked questions about the trans-NIH proposed project on research in Down syndrome, the Task Force on Research Specific to Pregnant Women and Lactating Women, and maternal mortality

Reasons for Optimism

House Appropriations Committee Chairman Tom Cole Oklahoma

Senate Appropriations Committee Chairman Roy Blunt Missouri

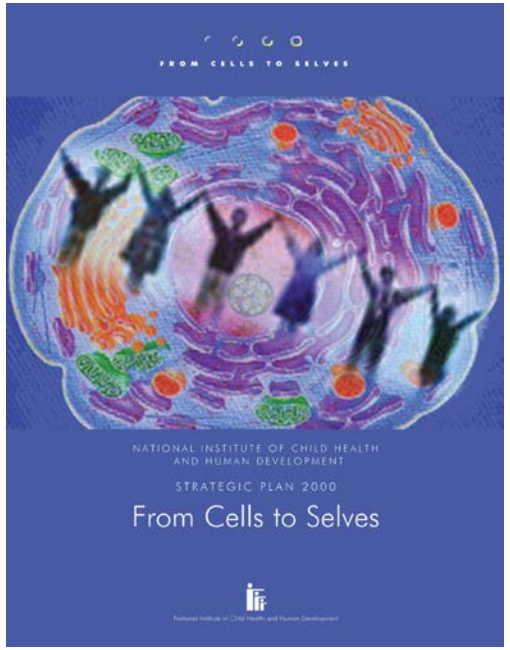
May 2, 2017: “What we did once, and we did twice, we can surely do thrice.”

March 14, 2018: Nancy Pelosi “A 3 billion increase for NIH…”
March 23, 2018: A historic 75 million dollar increase for NICHD!

April 18, 2018: Tom Cole “We’d like to do it a fourth time.”

NICHD Strategic Planning

NICHD Strategic Planning Process



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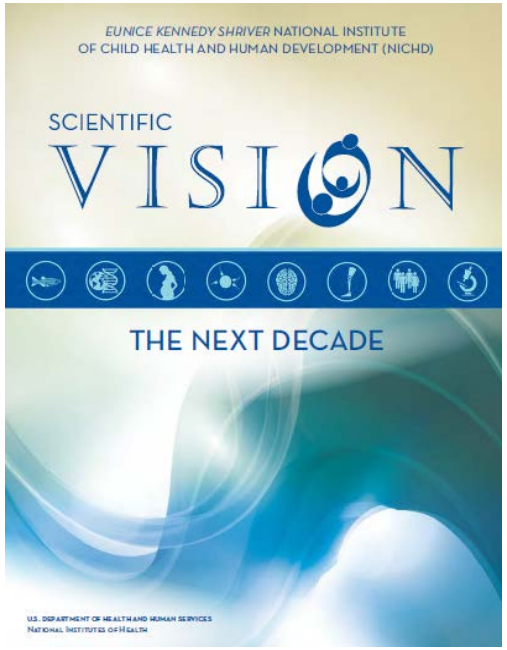


2012

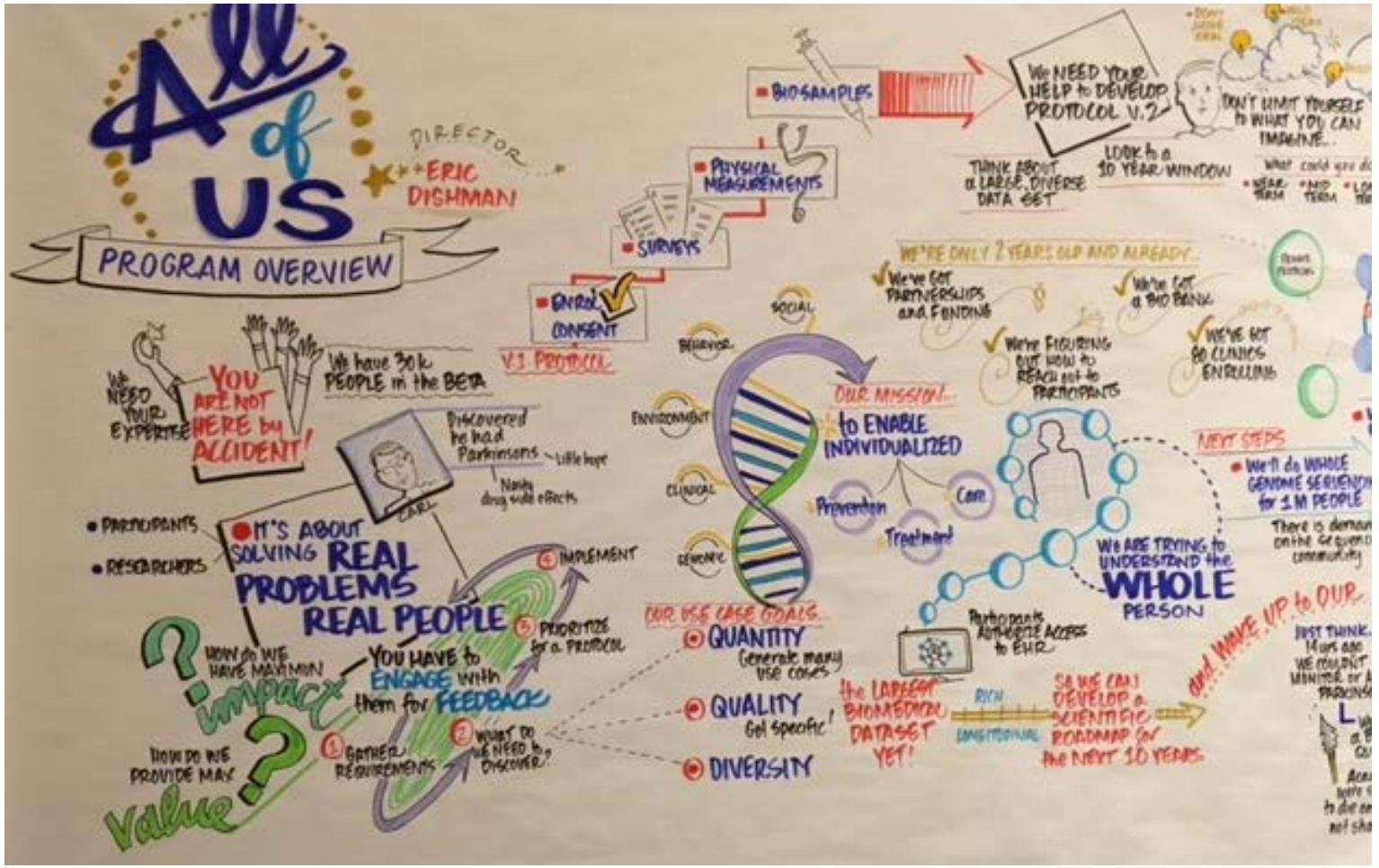
NICHD Strategic Planning Process

Guiding Principles: Focus on the science, evidence-based, inclusive and community-centric, emphasis on transparency and accountability for all aspects of strategic planning process – no *a priori* decisions have been made.

Strategic Planning: End Goals and Work Plan

- End goals: Determine scientific priorities for NICHD moving forward, align resources with priorities
- Work plan:
  - Developed a set of focus questions
  - NICHD planning subcommittee has met
  - Evidence based:
    - Incorporate impact analyses
  - Strategic Plan Work Group will include ~80 people, half from NIH and half from external communities
  - Stay tuned: 2018/2019 timeline
    - 2-day meeting October 2018
    - Updates to be posted on NICHD website

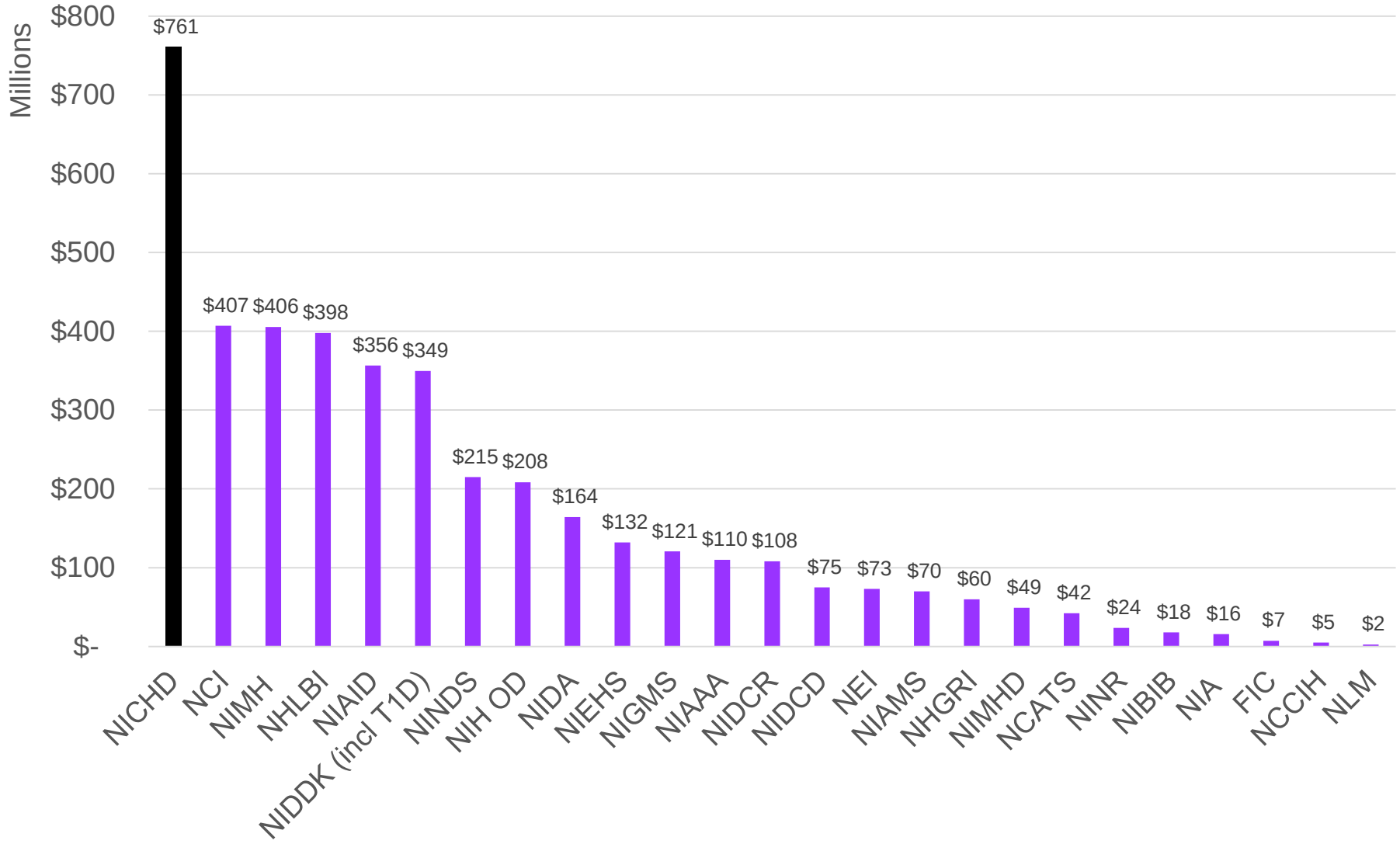
Graphical Recording



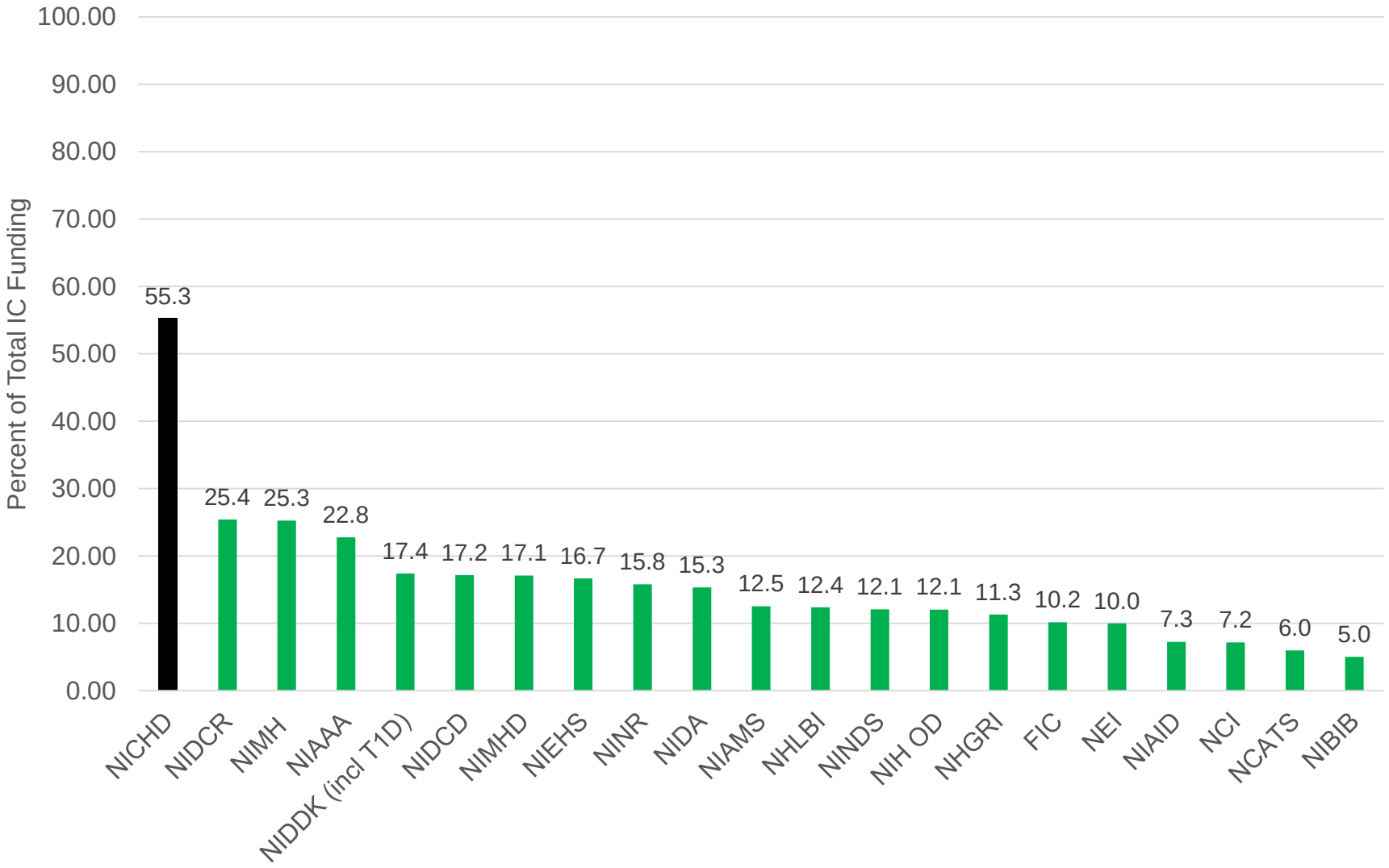
Trans-NIH Pediatric Research Consortium (N-PeRC)

NIH Pediatric Research Funding, 2011-2017

NIH Pediatric Research, FY 2017, by IC



FY 2017: Per Cent Pediatric Research by IC



Formation of the Trans-NIH Pediatric Research Consortium (N-PeRC)

- Harmonize efforts in child health research across 27 Institutes and Centers
- Identify gaps and opportunities for collaboration
- Enhance communication between NIH, advocacy groups and Capitol Hill
- Outreach effort to encourage senior pediatric researchers to serve on review panels
- Trans-NIH supported training to grow pediatric work force
- First meeting will be June 12

Progress Towards Inclusion

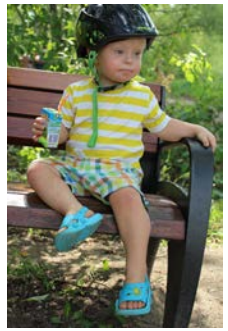
Progress Towards Inclusion

Pregnant Women

- Task Force for Research Specific to Pregnant Women and Lactating Women (PRGLAC)
- New RCDC codes
- PregSource®
- NIH Clinical Center

Children

- Inclusion of children in NIH Research Workshop
- *All of Us* Strategic Vision
- Trans-NIH Pediatric Research Consortium

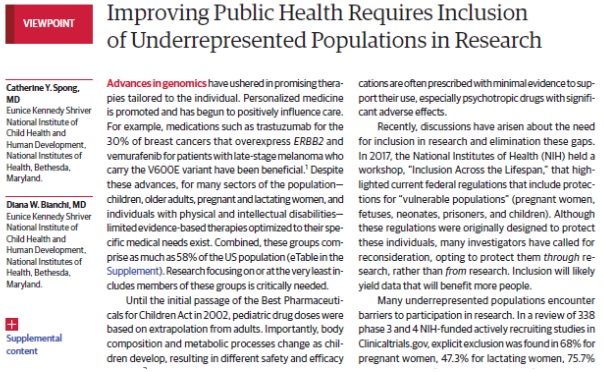


Intellectual/Physical Disabilities

- *All of Us* Advocacy
- InCLUDe

Lactating Women

- PRGLAC
- New RCDC codes



VIEWPOINT

Improving Public Health Requires Inclusion of Underrepresented Populations in Research

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Supplemental content

Advances in genomics have ushered in promising therapies tailored to the individual. Personalized medicine is promoted and has begun to positively influence care. For example, medications such as trastuzumab for the 30% of breast cancers that overexpress *ERBB2* and vemurafenib for patients with late-stage melanoma who carry the V600E variant have been beneficial.[1] Despite these advances, for many sectors of the population—children, older adults, pregnant and lactating women, and individuals with physical and intellectual disabilities—limited evidence-based therapies optimized to their specific medical needs exist. Combined, these groups comprise as much as 58% of the US population (eTable in the Supplement). Research focusing on or at the very least includes members of these groups is critically needed.

Until the initial passage of the Best Pharmaceuticals for Children Act in 2002, pediatric drug doses were based on extrapolation from adults. Importantly, body composition and metabolic processes change as children develop, resulting in different safety and efficacy considerations and medications are often prescribed with minimal evidence to support their use, especially psychotropic drugs with significant adverse effects.

Recently, discussions have arisen about the need for inclusion in research and elimination these gaps. In 2017, the National Institutes of Health (NIH) held a workshop, "Inclusion Across the Lifespan," that highlighted current federal regulations that include protections for "vulnerable populations" (pregnant women, fetuses, neonates, prisoners, and children). Although these regulations were originally designed to protect these individuals, many investigators have called for reconsideration, opting to protect them *through* research, rather than *from* research. Inclusion will likely yield data that will benefit more people.

Many underrepresented populations encounter barriers to participation in research. In a review of 338 phase 3 and 4 NIH-funded actively recruiting studies in Clinicaltrials.gov, explicit exclusion was found in 68% for pregnant women, 47.3% for lactating women, 75.7%

All

- Commentary: *JAMA* 2018; 319:337-8

Pregnant Women In Studies at the NIH Clinical Center?

- Pregnant women have been historically excluded in clinical center studies
- A working group has been formed to examine benefits and risks of having healthy pregnant women participate in research protocols at the Clinical Center

PRGLAC Recommendations

- Central focus of recommendations is aimed at changing the culture that has significantly limited scientific knowledge of therapeutic product safety, effectiveness, and dosing for pregnant and lactating women
- Task Force Members voted on each recommendation
- All 15 recommendations are available online: https://www.nichd.nih.gov/About/Advisory/PRGLAC

PRGLAC Recommendation: Include and integrate pregnant women and lactating women in the clinical research agenda

- Remove pregnant women as an example of a vulnerable population in the common rule
- FDA should harmonize with the common rule and remove pregnant women as a vulnerable population
- Develop HHS Guidance to facilitate the conduct of research in pregnant women and lactating women

PRGLAC Recommendation: Expand the workforce of clinicians and research investigators with expertise in obstetric and lactation pharmacology and therapeutics

- Develop and support training and career development opportunities in obstetric and lactation pharmacology and therapeutics for both clinical and basic science
- Develop mentors in obstetric and lactation pharmacology and therapeutics for both clinical and basic science
- Increase the knowledge and engagement of health care providers regarding obstetric and lactation pharmacology and therapeutics

PRGLAC Recommendation: Increase quantity, quality, and timeliness of research on safety and efficacy of therapeutic products used by pregnant women and lactating women

- Provide additional resources and funding for research to obtain clinically meaningful and relevant data for both specific and co-existing conditions in pregnant women and lactating women
  - Including but not limited to:
    - Develop preclinical models
    - Expand basic science research to inform drug development
    - Develop new tools and methods to assay therapeutic products such as those that utilize small volumes and are sensitive to detect minute quantities including in human milk
    - Develop new tools to assess pharmacodynamic response in pregnant women, lactating women, and children
    - Fund clinically relevant research and studies to inform therapeutic product use in pregnant women and lactating women
    - Design trials to capture long term maternal, obstetric, and child outcome
  - Utilize longer award periods by government funders (beyond the typical 5 year award) when needed for study design and data collection

Staff Updates

Roz King, Ph.D, Appointed as New Associate Director for Prevention

- As NICHD's Associate Director for Prevention, she coordinates and promotes institute programs related to the prevention of health problems of mothers and children. The institute portfolio includes prevention-focused activities in the basic, translational, and clinical research realms.
- Continues her responsibilities as a Program Director in the NICHD Population Dynamics Branch

Review of Scientific Director's Performance

- All SDs are reviewed every 5 years
- Regularly-scheduled review by external committee, chaired by Catherine Gordon, analyzing
  - Scientific Vision
  - Training and Mentoring
  - Administrative style
  - Diversity
- Review committee met in early April
- Interviewed staff
- Survey sent out to all DIR FTEs
- Finalizing draft report due July 1
- Report on track for presentation to NACHD at September meeting

Congratulations and Best Wishes to Cathy Spong!

- In June she will leave NICHD after more than 23 years in federal service
- She has accepted a position at the University of Texas-Southwestern in Dallas as Chief of Maternal-Fetal Medicine and Vice-Chair of the Department of Obstetrics and Gynecology

Thank You and Questions