FY 2023 Annual Performance Plan Data Validation Table

Measure ID	Data Source	Data Validation
1D (new) (ACF)	TBD	TBD
1F (new) (ACF)		
3A (ACF)	Classroom Assessment Scoring System (CLASS: Pre-K)	CLASS: Pre-K is a valid and reliable tool that uses observations to rate the interactions between adults and children in the classroom. Reviewers, who have achieved the standard of reliability, assess classroom quality by rating multiple dimensions of teacher-child interaction on a seven point scale (with scores of one to two being in the low range; three to five in the mid-range; and six to seven in the high range of quality); low range is defined as any CLASS review with a domain scoring below 2.5 for purposes of this performance measure. ACF will implement ongoing training for CLASS: Pre-K reviewers to ensure their continued reliability. Periodic double-coding of reviewers is also used, which is a process of using two reviewers during observations to ensure they continue to be reliable in their scoring.
3C (ACF)	Program Information Report (PIR)	The PIR is a survey of all grantees that provides comprehensive data on the services, staff, children, and families served in Head Start and Early Head Start programs nationwide. Head Start achieves a 100 percent response rate annually from over 3,200 PIR submissions. Many years of PIR data is accessible to the public including summary reports at the national, state, and program level.
4A (ACF)	The Runaway and Homeless Youth - Homeless Management Information System (RHY-HMIS)	In FY 2015, ACF entered into a Memorandum of Understanding with HUD, SAMHSA, and VA to use Homeless Management Information Systems (HMIS) as primary information technology systems to enter data on clients served by Federally-funded

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		homeless assistance services. Since FY 2015, RHY grantees have been using local HMIS systems to upload de-identified client-level data to the RHY national data repository called RhyPoint. Following each upload, grantee data are validated by RhyPoint and a report is sent to grantees to monitor and improve data completeness and quality. The aggregate data are then cleaned and validated using a set of business rules developed by FYSB to make sure that records are accurate and relevant using a number of logic checks.
7B (ACF)	National Child Abuse and Neglect Data System (NCANDS)	States report child welfare data to ACF through the NCANDS. Each state's annual NCANDS data submission undergoes an extensive validation process which may result in revisions to improve data accuracy. To speed improvement in these data, ACF funds a contractor to provide technical assistance to states to improve reporting and validate all state data related to outcome measures. The Children's Bureau, in ACF, and the NCANDS project team are working with states through national meetings, advisory groups, and state-specific technical assistance to encourage the most complete and accurate reporting of these data in all future submissions. All of these activities should continue to generate additional improvements in the data over the next few years.
7D (ACF)	State Annual Reports	States are required to submit an Annual Report addressing each of the Community-Based Child Abuse Prevention (CBCAP) performance measures outlined in Title II of the Child Abuse Prevention and Treatment Act. One section of the report must "provide evaluation data on the outcomes of funded programs and activities." The 2006 CBCAP Program Instruction adds a requirement that the states must also report

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		on the OMB performance measures reporting requirements and national outcomes for the CBCAP program. States were required to report on this efficiency measure starting in December 2006. The three percent annual increase represents an ambitious target since this is the first time that the program has required programs to target their funding towards evidence-based and evidence-informed programs, and it will take time for states to adjust their funding priorities to meet these requirements.
7S (ACF)	Regulatory Title IV-E Foster Care Eligibility Reviews	Data validation occurs on multiple levels. Information collected during the onsite portion of the review is subject to quality assurance procedures to assure the accuracy of the findings of substantial compliance and reports are carefully examined by the Children's Bureau Central and Regional Office staff for accuracy and completeness before a state report is finalized. Through the error rate contract, data is systematically monitored and extensively checked to make sure the latest available review data on each state is incorporated and updated to reflect rulings by the Departmental Appeals Board and payment adjustments from state quarterly fiscal reports. This ensures the annual program error rate estimates accurately represent each state's fiscal reporting and performance for specified periods. The Children's Bureau also has a database (maintained by the contractor) that tracks all key milestones for the state eligibility reviews.
7T (ACF)	Adoption and Foster Care Analysis Reporting System (AFCARS)	States report child welfare data to ACF through AFCARS. All state semi-annual AFCARS data submissions undergo extensive edit-checks for validity. The results of the AFCARS edit-checks for each of the six-month data submissions are automatically generated and sent back to each state, to help the state to improve data quality. Many states submit revised data to ensure that accurate data are submitted, often for more than one prior submission period. The Children's Bureau has conducted AFCARS compliance reviews in all states. All states reviewed were required to undertake a comprehensive AFCARS Improvement Plan (AIP). To speed improvement in these data, the agency provides

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		technical assistance to states to improve reporting to AFCARS, improve statewide information systems, and to make better use of their data. All of these activities should continue to generate additional improvements in the data over the next few years.
14A (ACF)	Administrative Data of National Domestic Violence Hotline (NDVH)	Data are maintained by the National Domestic Violence Hotline and reported to ACF. All calls are counted electronically, including calls that are responded to and calls that are "abandoned" (callers hang up prior to answering by an advocate). Calls are tracked for time, location, status of caller, and reason for call.
14i (ACF)		
15.1LT and 15A (ACF)	Performance Report (ORR-6)	Data are validated by periodic desk and on-site monitoring, in which refugee cases are randomly selected and reviewed. During on-site monitoring, outcomes reported by service providers are verified with both employers and refugees to ensure accurate reporting of job placements, wages, and retentions.
16.1LT and 16C (ACF)	Matching Grant Progress Report forms	Data are validated with methods similar to those used with Performance Reports. Data are validated by periodic desk and on-site monitoring, in which refugee cases are randomly selected and reviewed. During on-site monitoring, outcomes reported by service providers are verified with both employers and refugees to ensure accurate reporting of job placements, wages, and retentions. All of the grantees use database systems (online or manual) for data collection and monitoring of their program service locations.
17D (ACF)	Grantee of the National Human Trafficking Hotline, which provides reports to ACF on the number and profile of calls to the hotline.	The program engages in regular monitoring of grantee.
19A (ACF)	The Division of Children's Services (DCS) Unaccompanied Children (UC) Portal database system and Office of Refugee Resettlement (ORR) Intakes Team monthly referral and UC pending data.	The DCS - UC Portal database will provide close to real-time statistics on discharges, capacity availability, and UC pending placement by the Department of Homeland Security (DHS) post referral. Data collected by

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		grantees through the UC Portal will be carefully tracked and verified by DCS, and grantees will be provided with detailed guidance to ensure consistent reporting. DCS collects grantee-related performance information including: Quarterly Program Progress Reports on program adjustments and progress toward meeting performance goals and objectives of the UC Cooperative Agreement; Monthly Statistical Reports (arrivals, departures, releases, and immigration case disposition); Daily grantees' electronic updates and case file information (admission information - admission date, time, and type; and Discharge Information - discharge date, time, type, and detail). DCS also conducts annual program monitoring and site visits as needed for the purpose of ensuring that the grantee's service delivery and financial management meet the requirements and standards of the DCS program. The ORR- DCS Intakes team also tracks the daily number of UC referrals and the number of UC pending placement in excess of 24 hours.
20.2LT and 20E (ACF)	Office of Child Support Enforcement (OCSE) Form 157	States currently maintain information on the necessary data elements for the above performance measures. All states were required to have a comprehensive, statewide, automated Child Support Enforcement system in place by October 1, 1997. Fifty-three states and territories were Family Support Act-certified and Personal Responsibility and Work Opportunity Reconciliation Act-certified (PRWORA) as of July 2007. Certification requires states to meet automation systems provisions of the specific act. Continuing implementation of these systems, in conjunction with cleanup of case data, will improve the accuracy and consistency of reporting. As part of OCSE's audit of performance data, OCSE Auditors review each state's and territory's ability to produce valid data. Data reliability audits are conducted annually. Self-evaluation by states and OCSE audits provide an on-going review of the validity of data and the ability of automated systems to produce accurate data. Each year OCSE Auditors review the data that states report for the previous fiscal year. The OCSE Office of Audit has completed the FY 2015 data

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		reliability audits. Since FY 2001, the reliability standard has been 95 percent.
20B (ACF)	Office of Child Support Enforcement (OCSE) Form 157	States currently maintain information on the necessary data elements for the above performance measures. All states were required to have a comprehensive, statewide, automated Child Support Enforcement system in place by October 1, 1997. Fifty-three states and territories were Family Support Act-certified and Personal Responsibility and Work Opportunity Reconciliation Act-certified (PRWORA) as of July 2007. The remaining state is in systems development. Certification requires states to meet automation systems provisions of the specific act. Continuing implementation of these systems, in conjunction with cleanup of case data, will improve the accuracy and consistency of reporting. As part of OCSE's audit of performance data, OCSE auditors review each state's and territory's ability to produce valid data. Data reliability audits are conducted annually. Self-evaluation by states and OCSE audits provide an on-going review of the validity of data and the ability of automated systems to produce accurate data. Each year OCSE auditors review the data that states report for the previous fiscal year. The OCSE Office of Audit has completed the FY 2015 data reliability audits. Since FY 2001, the data reliability audit standard for reliable data has been 95 percent.
22D (ACF)	National Directory of New Hires (NDNH)	Beginning with performance in FY 2001, the above employment measures – employment entry, employment retention, and median earnings gain – are based solely on earnings data obtained from the NDNH. Data are updated by states, and data validity is ensured with normal auditing functions for submitted data. Prior to use of the NDNH, states had flexibility in the data source(s) they used to obtain wage information on current and former TANF recipients under high performance bonus (HPB) specifications for performance years FY 1998 through FY 2000. ACF moved to this single source national database (NDNH) to

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		ensure equal access to wage data and uniform application of the performance specifications.
22F (ACF)	TANF Financial Data, submitted by states through the ACF-196R	Data are validated via single state audits and internal HHS data checks.
2.10 (ACL)	State Program Report and National Survey of Older Americans Act Participants.	This is a composite measure that utilizes data from multiple sources. One source is the State Program Report. Another source is the National Survey. The State Program Report data is submitted annually by States. The web-based submissions include multiple data checks for consistency. Multi-year comparison reports are reviewed by ACL's Administration on Aging (AoA) and State staff. AoA staff follow-up with States to assure validity and accuracy. After revisions, States certify the accuracy of their data. The National Survey draws a sample of Area Agencies on Aging to obtain a random sample of clients receiving selected Older Americans Act (OAA) services. Trained staff administers telephone surveys. Results are analyzed and compared to client population to assure representative sample.
8F (ACL)	Protection and Advocacy for Individuals with Developmental Disabilities (PADD) Annual Program Performance Report (PPR).	Outcome data for each fiscal year are reported in PPRs submitted in January of the following fiscal year. Verification and validation of data occur through ongoing review and analysis of annual reports. Data collected in the PADD PPR is validated and verified by comparing the data against parameters of that field and also compared with previous year's data. In case of any outlier data, grantees are asked to verify and/or validate and provide ACL with an explanation and/or supporting documents.
1.3.19 (AHRQ)	The number of tables included in the MEPS Tables Compendia can be verified at http://meps.ahrq.gov/mepsweb/data_stats/quick_tables.jsp.	Data published on website A number of steps are taken from the time of sample selection up to data release to ensure the reliability and accuracy of MEPS data including:

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		• Quality control checks are applied to the MEPS sample frame when it is received from NCHS as well as to the subsample selected for MEPS. • Following interviewer training, performance is monitored through interview observations and validation interviews. • A variety of materials and strategies are employed to stimulate and maintain respondent cooperation. • All manual coding and data entry tasks are monitored for quality by verification at 100 percent until an error rate of less than 2 percent is achieved for coding work or less than 1 percent for data entry. • All specifications developed to guide the editing, variable construction and file creation are monitored through data runs that are used to verify that processes are conducted correctly and to identify data anomalies. • Analytic weights are developed in a manner that reduces nonresponse bias and improves national representativeness of survey estimates. • The precision of survey estimates are reviewed to insure they are achieving precision specifications for the survey. • Prior to data release, survey estimates on health care utilization, expenditures, insurance coverage, priority conditions and income are compared to previous year MEPS data and other studies. Significant changes in values of constructed variables are investigated to determine whether differences are attributable to data collection or variable construction problems that require correction. • Expenditure data obtained from the MEPS medical provider survey are used to improve the accuracy of household reported data.

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Validation Table

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1.3.41 (AHRQ)	AHRQ FOAs, grant awards, and contract records	AHRQ staff (i.e., project officers, portfolio leads, grants management and contracts staff) monitor project completion and dissemination of results
2.3.7 (AHRQ)	U.S. Preventive Serivces Task Force Web site (www.uspreventiveservicestaskforce.org) in a new section on special populations, "*Focus on Older Adults*".	U.S. Preventive Serivces Task Force Web site (www.uspreventiveservicestaskforce.org) in a new section on special populations, "*Focus on Older Adults*".
2.3.9 (AHRQ)		
1.4 (ASA)	DOE's Annual Energy Managment Data Report	Program Support Center (PSC), Real Estate, Logistics and Operations (RLO)
1.5 (ASA)	Bill of Ladings, Municipal Waste Tracking forms, and Solid Waste and Recycling Tickets.	OpDiv energy managers validate prior to submission to ASA/PSC, PSC RLO is final validator
1.6 (ASA)	Metered data (i.e., utility bills)	OpDiv energy managers validate prior to submission to ASA/PSC, PSC RLO is final validator
1.7 (ASA)	Metered data (i.e., utility bills)	OpDiv energy managers validate prior to submission to ASA/PSC, PSC RLO is final validator
2.6 (ASA)	The Employee Engagement Index is comprised of three subindices: Leaders Lead, Supervisors, and Intrinsic Work Experience. Each subindex is assessed through multiple questions on the Office of Personnel Management (OPM) Federal Employee Viewpoint Survey (FEVS) https://www.opm.gov/fevs/	Office of Personnel Management validates the data
2.8 (ASA)	Intrinsic work experience index comprised 5 questions on the OPM FEVS https://www.opm.gov/fevs/	OPM validates the survey data
2.9 (ASA)	Employee Satisfaction with... Opportunities for Professional Development and Growth index comprised 2 questions on the OPM FEVS https://www.opm.gov/fevs/	OPM validates the data

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3.3 (ASA)	Risk Management Framework Portal (RMFP)	The HHS Office of Chief Information Director of Information Security validates these data.
3.7 (ASA)	PhishMe Solution and PhishMe Report	The HHS Office of Chief Information Director of Information Security validates these data.
1.3 (ASPR)	Data sources for the performance measure 1.3 are collected and reported from the number of analytical tools and programs and represent the advanced adoption, implementation, training and engagement from federal to community level partners. Data is collected using these tools from a number of different systems that include: HHS emPOWER Map (https://empowermap.hhs.gov), HHS emPOWER Program Web-Based Training (TRAIN Learning Network), HHS emPOWER REST Service via ASPR's GeoHEALTH Platform (https://geohealth.hhs.gov/arcgis/home/) and Twitter, Facebook and LinkedIN social media platforms. Due to a google analytics limitation we are not able to estimate how many sub-sessions are included within a single session. Given this, we have conservatively applied an average of three sub-session per session reported and thus have conservatively undercounted uses of both the Map and the REST service based on this data collection and reporting protocol.	All data are collected using analytical tools that include: google analytics (i.e. HHS emPOWER Map, emPOWER informational resource download data), ESRI analytics (emPOWER REST Service data), TRAIN Learning Network analytics (HHS emPOWER Web-based Training data) and social media analytics (i.e. Twitter, LinkedIN, Facebook). The HHS emPOWER Program staff and support contractors are experts in data analysis and commonly report accurate and complete data for departmental, interagency and other external documents, reports and peer-reviewed journals, etc. The HHS emPOWER Program staff and support contractors conduct additional analyses to clean, further validate and ensure interpretation accuracy prior to emPOWER data being reported
2.4.13a (ASPR)	For all performance measures related to licensure, emergency use authorization, and/or commercialization of medical countermeasures are captured either through approval from appropriate	All data are checked against multiple databases to ensure accuracy and validation of the numbers reported. Contracts awarded and draft requests for proposal for industry comment are negotiated

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	regulatory agencies such as the United States Food and Drug Administration (FDA) and/or associated host country regulatory licensing board. This information is publically available and has gone through rigorous review approval for the safety, efficacy, tolerability and immunogenicity of such medical countermeasure for the advancement of pandemic preparedness and critical lifesaving interventions. During emergency times, Emergency Use Authorization's (EUA) are assigned by the FDA to move forward certain lifesaving technologies in order to meet pandemic preparedness and response timelines. All EUAs are made public on the FDA website (https://www.fda.gov/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/MCMLegalRegulatoryandPolicyFramework/ucm182568.htm#current)	and issued, respectively, in accordance with Federal Acquisition Regulations (FAR) and the HHS Acquisition Regulations (HHSAR). Interagency Agreements are developed with federal laboratories to address specific advanced research questions. Contractors and awardees are required by contract terms and conditions to report on inventions, discovery, and other advancements in the advanced development of medical countermeasures. This information is used for quality assurance and control purposes to ensure data reported is accurate.
2.4.15b (ASPR)	Data sources for performance measure 2.4.15b are collected and reported from the number of executed awards made during the fiscal year as it relates to the advanced research and development of influenza vaccines and broad-spectrum therapeutics. Data sources will include www.USASpending.gov , www.fbo.gov , UFMS, and other government systems. BARDA	All data are checked against multiple databases to ensure accuracy and validation of the numbers reported. Contracts awarded and draft requests for proposal for industry comment are negotiated and issued, respectively, in accordance with Federal Acquisition Regulations (FAR) and the HHS Acquisition Regulations (HHSAR).

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	staff are experts in analysis and report a great deal of accurate and complete data.	
1.3.3a (CDC)	Behavioral Risk Factor Surveillance System (BRFSS) Behavioral Risk Factor Surveillance System (BRFSS), interviews conducted September-June for an influenza season (e.g., September 2011-June 2012 for the 2011-12 influenza season) and provided to ISD from NCCDPHP by August (e.g. August 2012 for the 2011-12 influenza season). Final results usually available by September (e.g. September 2012 for the 2011-12 influenza season). BRFSS is an on-going state-based monthly telephone survey which collects information on health conditions and risk behaviors from ~400,000 randomly selected persons ≥18 years among the non-institutionalized, U.S. civilian population. Numerator: BRFSS respondents were asked if they had received a 'flu' vaccine in the past 12 months, and if so, in which month and year. Persons reporting influenza vaccination from August through May (e.g., August 2011-May 2012 for the 2011-12 flu season) were considered vaccinated for the season. Persons reporting influenza vaccination in the past 12 months but with missing month or year of vaccination had month and year imputed from donor pools matched for week of interview, age group, state of residence and race/ethnicity. The cumulative proportion of persons receiving influenza vaccination coverage during August through May is estimated via Kaplan-Meier analysis in SUDAAN using monthly interview data collected September through June. Denominator: Respondents age ≥18 years responding to the BRFSS in the 50 states and the District of Columbia with interviews conducted September-June for an influenza season (e.g., September 2011-June 2012 for the 2011-12	Data validation methodology: Estimates from BRFSS are subject to the following limitations. First, influenza vaccination status is based on self or parental report, was not validated with medical records, and thus is subject to respondent recall bias. Second, BRFSS is a telephone-based survey and does not include households without telephone service (about 2% of U.S. households) and estimates prior to the 2011-12 influenza season did not include households with cellular telephone service only, which may affect some geographic areas and racial/ethnic groups more than others. Third, the median state CASRO BRFSS response rate was 54.4% in 2010, and nonresponse bias may remain after weighting adjustments. Fourth, the estimated number of persons vaccinated might be overestimated, as previous estimates resulted in higher numbers vaccinated than doses distributed.

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	influenza season) and provided to ISD from NCCDPHP by August (e.g. August 2012 for the 2011-12 influenza season). Persons with unknown, refused or missing status for flu vaccination in the past 12 months are excluded.	
3.D (CDC)	WGS data uploaded to the PulseNet National database.	Data can be directly queried from the PulseNet National Database to validate it.
4.6.2a (CDC)	US Census and Treasury; Alcohol Tobacco Tax and Trade Bureau (TTB), Monthly Statistical Reports, and the Census Bureau Annual Census Estimates	Data is pulled from public reports from US Census and Treasury, and validated through HHS and CDC calculations.
4.10.1 (CDC)		The BRFSS question for arthritis has been validated and cognitively tested. The question on counseling for physical activity has been used in the National Health Interview Survey for many years to support the relevant Healthy People 2020 arthritis objective, so it has presumably been through cognitive testing by the National Center for Health Statistics.
4.11.9 (CDC)	National Health Interview Survey (NHIS), CDC, NCHS	Data are reported from a national surveillance system and follow predetermined quality control standards.
5.3.2 (CDC)	*Public Health Surveillance Project for Bleeding Disorders (PHSPBD)*	*The data will be validated through follow-up with the patients' physician on elevated titers measured and reported to them by CDC's blood disorders laboratory. Also, as part of a research project, some of the patients who have elevated titers reported will be followed with serial repeat inhibitor titer measurements and data collection about treatment to confirm that the reported inhibitor was a valid case*
6.C (CDC)	Data reported to CDC through a performance management system by state and local health departments funded by	Each receipient is evaluated using criteria the program has developed to meet this and other requirements.

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	CDC's National Environmental Public Health Tracking Program.	
7.F (CDC)	Programmatic data	Data are observed and reported by program officers within Injury and will be available annually.
7.G (CDC)	Injury Prevention web content	Data will be available on an ongoing as-needed basis, as they are drawn directly from publicly observable data and content on Injury web pages (across all content areas)
8.A.1.1b (CDC)	Interviews with Federal Power Users	In-person survey of survey users based on input from NCHS senior staff and the Board of Scientific Counselors.
8.B.4.2 (CDC)	CDC/Council of State and Territorial Epidemiologists' (CSTE) Applied Epidemiology Fellowship, Post-EIS Practicum (now known as the Health Systems Integration Program. The Informatics Training in Place Program was added in FY 2014. Trainees funded by other federal agencies are excluded. This also includes EIS field officers and PHAP.	Staff reviews and validates data through the fellowship programs' personnel systems.
10.C.4 (CDC)	Internal CDC records; Specimen Tracking and Retrieval Laboratory Information Management Systems (STARLiMS)	Each year, CDC laboratories receive hundreds of thousands of human and environmental specimens from its various partners in public health throughout the United States and abroad. Many of these specimens contain organisms or products that other laboratories could not identify, and virtually all of these specimens are automatically archived because of their potential importance to public health and safety. These specimens are collected for the purpose of detecting, controlling, and preventing morbidity and mortality from diseases. Specimens are used for a variety of purposes, including research, pathogen discovery, diagnostics, reference diagnostics, vaccine development, and supporting external scientific research activities within multiple National Centers across CDC.

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		Upon receipt, CDC logs, tracks, and examines these specimens and provides reports of any laboratory tests to the submitter of the specimen or other appropriate authorities. Specimen logging, tracking, and reporting is managed by the automated Specimen Tracking and Retrieval Laboratory Information Management Systems (STARLiMs).
10.F.1c (CDC)	WIDB FETP quarterly data based on calendar year	DGHP OD M&E team collaborates with the Monitoring Assessment and Evaluation Unit in WIDB to obtain and clarify data, via Division-Wide Indicators. WIDB works directly with countries' FETPs to validate graduate numbers.
CHIP 3.3 (CMS)	States are required to submit quarterly and annual CHIP and Medicaid statistical forms to CMS through the automated Statistical Enrollment Data System (SEDS). Using these forms, States report quarterly and annually on unduplicated counts of the number of children under age 19 who are enrolled in CHIP and unduplicated counts of children under age 21 who are enrolled in Medicaid. The enrollment counts presented reflect an unduplicated number of children ever enrolled during the year in separate CHIP, Medicaid expansion CHIP programs, and the Medicaid program.	Each State must assure that the information is accurate and correct when the information is submitted to SEDS by certifying that the information shown on the CHIP forms is correct and in accordance with the State's child health plan as approved by the Secretary. CMS staff populates the data into various SEDS reports and verifies each of the enrollment measures. Each form has the following seven measures that are reported by service delivery system: 1: Unduplicated Number Ever Enrolled During the Quarter. 2: Unduplicated Number of New Enrollees in the Quarter. 3: Unduplicated Number of Disenrollees in the Quarter. 4: Number of Member-Months of Enrollment in the Quarter. 5: Average Number of Months of Enrollment (item 4 divided by item 1). 6: Number Enrolled At Quarter's End (point in time). 7: Unduplicated Number Ever Enrolled in the Year" (4th Quarter Only). CMS compares these enrollment measures to past quarters and trends over the life of each program to ensure that there aren't any anomalies in the data, and if apparent errors are detected, CMS corresponds with the State staff who are responsible for reporting enrollment statistics. If there are major increases or decreases, CMS investigates the causes of the changes in enrollment patterns.

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		CMS staff populates the data into various SEDS reports and verifies each of the enrollment measures. Each form has the following nine measures that are reported by service delivery system: **1:** Unduplicated Number Ever Enrolled During the Quarter. **2:** Unduplicated Number of New Enrollees in the Quarter. **3:** Unduplicated Number of Disenrollees in the Quarter. **4:** Number of Member-Months of Enrollment in the Quarter. **5:** Average Number of Months of Enrollment (item 4 divided by item 1). **6:** Number Enrolled At Quarter's End (point in time). **7:** Unduplicated Number Ever Enrolled in the Year" (4^{th} Quarter only). **8.** Unduplicated Number of New Enrollees in the Year (4^{th} Quarter only). **9.** Unduplicated Number of Disenrollees in the Year (4^{th} Quarter only). CMS compares these enrollment measures to past quarters and trends over the life of each program to ensure that there aren't any anomalies in the data, and if apparent errors are detected, CMS corresponds with the State staff responsible for reporting enrollment statistics. If there are major increases or decreases, CMS investigates the causes of the changes in enrollment patterns.
MCR23 (CMS)	The Prescription Drug Event (PDE) data	CMS has a rigorous data quality program for ensuring the accuracy and reliability of the PDE data. The first phase in this process is on-line PDE editing. The purpose of on-line editing is to apply format rules, check for legal values, compare data in individual fields to other known information (such as beneficiary, plan, or drug characteristics) and evaluate logical consistency between multiple fields reported on the same PDE. On-line editing also enforces business order logic which ensures only one PDE is active for each prescription drug event. The second phase of our data quality program occurs after PDE data has passed all initial on-line edits and is saved in our data repository. We

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		conduct a variety of routine and ad hoc data analysis of saved PDEs to ensure data quality and payment accuracy.
MCR36 (CMS)	Medicare Shared Savings Program Financial Reconciliation Reports; Master Data Management (MDM) System; Integrated Data Repository (IDR); TAP files; CCW claims data; CMS Office of the Actuary (OACT) annual Part A and B expenditure data	*Numerator:* Model payment actuals for CMS downside risk APMs based on model specific data, such as the number of aligned beneficiaries and annual per beneficiary spending. *Denominator:* The CMS Office of the Actuary (OACT) actual or estimated annual Part A and B expenditure. CMS staff and contractors provide beneficiary alignment and expenditure data to CMMI. Model teams and contractors use quality assurance measures and data cleaning, including an audit and validation process of the programs that calculate the results to ensure the reliability of the results
MIP1 (CMS)	The Comprehensive Error Rate Testing (CERT) Program selects a random sample of Medicare Fee-for Service (FFS) claims from a population of claims submitted for Medicare Fee For Service payment. Complex medical review is performed on the sample of Medicare FFS claims to determine if the claims were properly paid under Medicare coverage, coding, and billing rules.	The CERT program is monitored for compliance by CMS through monthly reports from the contractors. In addition, the HHS Office of the Inspector General conducts annual reviews of the CERT program and its contractors.
MIP5 (CMS)	The Part C Improper Payment Measurement process measures the extent to which diagnostic data used in payment is substantiated by medical records submitted to CMS by MAOs. The diagnostic data is used to determine risk adjusted payments made to MAOs.	Data used to determine the Part C program improper payment rate is reviewed by several contractors. The Part C Improper Payment Measurement is based on data obtained from a rigorous Part C Improper Payment Measurement process in which medical records are reviewed by independent coding entities in the process of confirming that medical record documentation supports risk adjustment diagnosis data submitted by Medicare Advantage Organizations for payment.
MIP6 (CMS)	The payment error measurement in the Part D program is an estimate based on differences between Prescription	For the Part D payment error estimate, the data to validate payments comes from multiple internal and external sources,

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	Drug Event (PDE) records and a prescription or medication order. A PDE record represents a Part D claim for a prescription filled by a beneficiary.	including CMS' enrollment and payment files. A key data source is CMS' PDE Validation process, which validates PDEs through contractor review of supporting documentation submitted to CMS by Part D sponsors.
MIP9.1 (CMS)	As part of a national contracting strategy, adjudicated claims data, medical policies, and eligibility policies are gathered from the states for purposes of conducting medical reviews, data processing reviews, and eligibility reviews on a sample of the claims paid in each state.	CMS and our contractors are working with the 17 States to ensure that the Medicaid and CHIP universe data and sampled claims are complete and accurate and contain the data needed to conduct the reviews. In addition, the OIG conducts annual reviews of the PERM program and its contractors.
MIP9.2 (CMS)	As part of a national contracting strategy, adjudicated claims data, medical policies, and eligibility policies are gathered from the states for purposes of conducting medical reviews, data processing reviews, and eligibility reviews on a sample of the claims paid in each state.	CMS and our contractors are working with the 17 states to ensure that the Medicaid and CHIP universe data and sampled claims are complete and accurate and contain the data needed to conduct the reviews. In addition, the OIG conducts annual reviews of the PERM program and its contractors.
MIP12 (CMS)	Savings attributable to FPS edits.	The FPS contractor keeps a data repository of all Medicare FFS claim and claim line denials or rejections that have occurred as a result of an FPS edit, and CMS monitors the edits to ensure that FPS is adjudicating the claims as intended. CMS merges data from FPS edits and Medicare claims to calculate net savings, and conducts quality assurance of the results.
223215 (FDA)	Review performance monitoring is being done in terms of cohorts, e.g., the FY 2015 cohort includes applications received from October 1, 2014, through September 30, 2015. FDA uses the CDER Informatics Platform to capture the data used to calculate the performance metric. FDA	The CDER Informatics Platform is CDER's enterprise-wide system for supporting Abbreviated New Drug Application (ANDA) regulatory activities. The Platform is a multi-component system comprised of Integrity, Panorama, and Mercado. Integrity manages the master date ensuring its quality and accuracy; Panorama handles the workflow assuring timely completion of application review and related work; and Mercado provides the reporting necessary for data-driven decisions. The

Measure ID	Data Source	Data Validation
	has a quality control process in place to ensure the reliability of the performance data in the Platform.	type of information tracked in the Platform includes status, type of document, review assignments, status for all assigned reviewers, and other pertinent comments. CDER has in place a quality control process for ensuring the reliability of the performance data in the Platform. Document room task leaders conduct one hundred percent daily quality control of all incoming data done by their ANDA technicians. Senior task leaders then conduct a random quality control check of the entered data in the Platform. The task leader then validates that all data entered into the Platform are correct and crosschecks the information with the original document.
291101 (FDA)		
292203 (FDA)		
1010.01 (HRSA)	HRSA Bureau of Primary Health Care's Uniform Data System	Validated using over 1,000 edit checks, both logical and specific. These include checks for missing data and outliers and checks against history and norm.
1010.07 (HRSA)	Uniform Data System	Data not available for FY 2008 and 2007 due to changes in how race/ethnicity data is reported in UDS
1010.08 (HRSA)	Uniform Data System	Validated using over 1,000 edit checks, both logical and specific. These include checks for missing data and outliers and checks against history and norm.
1010.09 (HRSA)	HRSA Bureau of Primary Health Care's Uniform Data System	Validated using over 1,000 edit checks, both logical and specific. These include checks for missing data and outliers and checks against history and norm.
1010.10 (HRSA)	Uniform Data System	Validated using over 1,000 edit checks, both logical and specific. These include checks for missing data and outliers and checks against history and norm.

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Measure ID	Data Source	Data Validation
1010.11 (HRSA)	HRSA/Bureau of Primary Health Care contractors that perform PCMH surveys	Data validated by Health Center program staff.
2000.02 (HRSA)	Annual performance reports submitted by BHW grantees through the BHW Performance Management Handbook system.	Data are entered through a web-based system that incorporates extensive validation checks. Once approved by the project officer (1st level of review), data are cleaned, validated, and analyzed by scientists within BHW's National Center for Health Workforce Analysis (2nd level of review). Inconsistencies in data reported identified throughout the 2nd level of review are flagged and sent to the project officer for follow-up and correction.
2000.03 (HRSA)	Annual performance reports submitted by BHW grantees through the BHW Performance Management Handbook system	Data are entered through a web-based system that incorporates extensive validation checks. Once approved by the project officer (1st level of review), data are cleaned, validated, and analyzed by scientists within BHW's National Center for Health Workforce Analysis (2nd level of review). Inconsistencies in data reported identified throughout the 2nd level of review are flagged and sent to the project officer for follow-up and correction.
2000.04 (HRSA)	Annual performance reports submitted by BHW grantees through the BHW Performance Management Handbook system.	Data are entered through a web-based system that incorporates extensive validation checks. Once approved by the project officer (1st level of review), data are cleaned, validated, and analyzed by scientists within BHW's National Center for Health Workforce Analysis (2nd level of review). Inconsistencies in data reported identified throughout the 2nd level of review are flagged and sent to the project officer for follow-up and correction.
3020.02 (HRSA)	The data source for this measure is the HRSA Discretionary Grants Information System.	

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Validation Table

Measure ID	Data Source	Data Validation
3110.02 (HRSA)	Annual progress/continuation reports submitted by grantees.	Data confirmed by project officers.
3110.03 (HRSA)		
4000.03 (HRSA)	The RWHAP Services Report (RSR). The RSR contains client-level data and enables the Program to un-duplicate the estimated number of people who received at least one RWHAP-funded service within the reporting period.	This web-based data collection method communicates errors and warnings in the built-in validation process. To ensure data qality the Program conducts data verification for all RSR submissions. Recipients receive reports detailing items in need of correction and instructions for submiting revised data. The web system has an arrray of reports available through which the grantees and their funded providers can identify data issues that need to be resolved. In addition, the Program provides technical assistance and training during and after the submission period to address quality issues.
6010.01 (HRSA)	Annual grantee reports	Validated by project officers
6070.01 (HRSA)		
6090.03 (HRSA)		
23 (IHS)	Extraction of data from Resource and Patient Management System	Data verification by Public Health Nursing
68 (IHS)		
81 (IHS)	IHS Integrated Data Collection System Data Mart	Monthly review of reports for completeness regarding full participation and monitoring of outliers.
EPI-5 (IHS)		

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Measure ID	Data Source	Data Validation
CBRR-1.1 (NIH)	Doctorate Records File and the NIH IMPAC II administrative database	Analyses of career outcomes for predoctoral NRSA participants, compared to individuals who did not receive NRSA support, using the Doctorate Records File and the NIH IMPAC II administrative database.
CBRR-25 (NIH)	Administrative records and internal databases	Program staff, the NIGMS budget office, and QVR provided the number of funded slots/participants funded for NIGMS training programs in FY 2021. The NIGMS Division of Data Integration, Modeling, and Analytics (DIMA) and Program staff provided the proportion of trainees/participants in each program expected to be from diverse backgrounds.
CBRR-26 (NIH)	Publications, databases, administrative records and/or public documents Research Performance Progress Reports (RPPRs): https://grants.nih.gov/grants/rppr/index.htm Scientific Information Reporting System (SIRS): https://coreapps.nigms.nih.gov/SIR For more information about this measure, please contact Eileen.Oni@nih.gov.	Review by program and performance reporting staff
SRO-5.2 (NIH)	Grants and publications 4UH3DA050251-03 (PI Fiellen): https://reporter.nih.gov/search/ZPsmImJs_kGEVQmMMlSo2A/project-details/10408897 4UH3DA050189-03 (PI Ahrens): https://reporter.nih.gov/search/q16mokkSqkSYJFFKEUseMA/project-details/10441666	Review by program and performance reporting staff

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Validation Table

Measure ID	Data Source	Data Validation
SRO-5.18 (NIH)	Publications, databases, administrative records and/or public documents For additional information, contact Principal Investigator: Dr. Sherine El-Toukhy, sherine.el-toukhy@nih.gov	Review by principal investigator and performance reporting staff
SRO-5.19 (NIH)		
SRO-5.20 (NIH)		
6.1.8 (OASH)	Count of total officers	Total number of onboard officers from payroll reports.
100 (OCR)	Review of Milestone Updates	Staff will document all steps of their compliance review, including deliverables, and share them with the performance team to confirm all steps have been followed.
101 (OCR)	Count of Events	Staff will document the number of outreach events and include documentation of the event as is appropriate to confirm each event took place.
102 (OCR)	Review of Milestone Updates	Staff will document all steps of their compliance review, including deliverables, and share them with the performance team to confirm all steps have been followed.
1.1.0 (SAMHSA)	The program has two sources of data. The first are the reports that are entered into Electronic Research Administration (eRA) operated by NIH with a special module for SAMHSA which are entered on a regular schedule. The other source are the progress reports and data that are entered into the SAMHSA's Performance, Accountability and Reporting System (SPARS).	The two systems, eRA and SPARS have internal validation checks and upload function that must be met to accept a file and data upload/entry. The validation of the reports in eRA are accomplished by the Government Project officers (GPOs) responsible for the grant program. They must review and approve the report before they can be accepted. In addition, GPOs have a responsibility to have monthly calls with their

Measure ID	Data Source	Data Validation
		grantees where they can discuss in addition to program activities the information that is reported into SPARS
2.4.00 (SAMHSA)	S1. TRAC for both LAUNCH and Indigenous Project LAUNCH	All TRAC data are automatically checked as they are input into the TRAC system. Validation and verification checks are run as they are being entered. The system will not allow any data that are out of range or violate skip patterns to be saved into the TRAC database

FY 2021 Annual Performance Report Data Validation Table

Measure ID	Data Source	Data Validation
3A (ACF)	Classroom Assessment Scoring System (CLASS: Pre-K)	CLASS: Pre-K is a valid and reliable tool that uses observations to rate the interactions between adults and children in the classroom. Reviewers, who have achieved the standard of reliability, assess classroom quality by rating multiple dimensions of teacher-child interaction on a seven point scale (with scores of one to two being in the low range; three to five in the mid-range; and six to seven in the high range of quality); low range is defined as any CLASS review with a domain scoring below 2.5 for purposes of this performance measure. ACF will implement ongoing training for CLASS: Pre-K reviewers to ensure their continued reliability. Periodic double-coding of reviewers is also used, which is a process of using two reviewers during observations to ensure they continue to be reliable in their scoring.
4A (ACF)	The Runaway and Homeless Youth - Homeless Management Information System (RHY-HMIS)	In FY 2015, ACF entered into a Memorandum of Understanding with HUD, SAMHSA, and VA to use Homeless Management Information Systems (HMIS) as primary information technology systems to enter data on clients served by Federally-funded homeless assistance services. Since FY 2015, RHY grantees have been using local HMIS systems to upload de-identified client-level data to the RHY national data repository called RhyPoint. Following each upload, grantee data are validated by RhyPoint and a report is sent to grantees to monitor and improve data completeness and quality. The aggregate data are then cleaned and validated using a set of business rules developed by FYSB to make sure that records are accurate and relevant using a number of logic checks.
7B (ACF)	National Child Abuse and Neglect Data System (NCANDS)	States report child welfare data to ACF through the NCANDS. Each state's annual NCANDS data submission undergoes an

Measure ID	Data Source	Data Validation
		extensive validation process which may result in revisions to improve data accuracy. To speed improvement in these data, ACF funds a contractor to provide technical assistance to states to improve reporting and validate all state data related to outcome measures. The Children's Bureau, in ACF, and the NCANDS project team are working with states through national meetings, advisory groups, and state-specific technical assistance to encourage the most complete and accurate reporting of these data in all future submissions. All of these activities should continue to generate additional improvements in the data over the next few years.
7D (ACF)	State Annual Reports	States are required to submit an Annual Report addressing each of the Community-Based Child Abuse Prevention (CBCAP) performance measures outlined in Title II of the Child Abuse Prevention and Treatment Act. One section of the report must "provide evaluation data on the outcomes of funded programs and activities." The 2006 CBCAP Program Instruction adds a requirement that the states must also report on the OMB performance measures reporting requirements and national outcomes for the CBCAP program. States were required to report on this efficiency measure starting in December 2006. The three percent annual increase represents an ambitious target since this is the first time that the program has required programs to target their funding towards evidence-based and evidence-informed programs, and it will take time for states to adjust their funding priorities to meet these requirements.
14D (ACF)	Family Violence Prevention and Services Program Performance Progress Report Form	Grantees submit this data in an aggregated format (non-client level data). When the grantees submit their reports in the Online Data Collection System, there are automatic data validation and error checks that run before the grantees are able to submit their

Measure ID	Data Source	Data Validation
		reports. The Family Violence Prevention and Services Act (FVPSA) Office provides a check of each grantee's data by comparing the current year's data to prior years and checking for inconsistencies or typos. The grantee is then given a short amount of time to confirm the submitted data or revise the report. In addition, performance report data are used to inform grant monitoring by state administrators and federal staff.
16.1LT and 16C (ACF)	Matching Grant Progress Report forms	Data are validated with methods similar to those used with Performance Reports. Data are validated by periodic desk and on-site monitoring, in which refugee cases are randomly selected and reviewed. During on-site monitoring, outcomes reported by service providers are verified with both employers and refugees to ensure accurate reporting of job placements, wages, and retentions. All of the grantees use database systems (online or manual) for data collection and monitoring of their program service locations.
22B (ACF)	National Directory of New Hires (NDNH)	Beginning with performance in FY 2001, the above employment measures – employment entry, employment retention, and median earnings gain – are based solely on earnings data obtained from the NDNH. Data are updated by states, and data validity is ensured with normal auditing functions for submitted data. Prior to use of the NDNH, states had flexibility in the data source(s) they used to obtain wage information on current and former TANF recipients under high performance bonus (HPB) specifications for performance years FY 1998 through FY 2000. ACF moved to this single source national database (NDNH) to ensure equal access to wage data and uniform application of the performance specifications.

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Validation Table

Measure ID	Data Source	Data Validation
22G (ACF)	The nFORM (Information, Family Outcomes, Reporting, and Management) Data Collection and Reporting System	Healthy Marriage (HM) grantees use the nFORM system, along with web surveys for clients, to collect data at program exit on clients' attitudes toward marriage, as well as other information. To collect high-quality data, grantees receive ongoing training in data collection best practices through webinars, training videos, infographic-style "cheat sheets," in-person presentations, and bi-monthly virtual office hours. Grantees also receive individualized technical assistance through a ticketing system in nFORM, with assistance provided by email and phone calls. The use of ACASI (audio computer-assisted self-interviewing) surveys further enhances the rigor of the client survey data. Clients complete web surveys on their own, which reduces responding in socially desirable ways and eliminates variation in how interviewers might ask questions. The web surveys also include automated skip patterns so that clients only answer questions that apply to them and "soft checks" that provide an additional prompt for clients to answer questions before skipping them as a way to encourage data completeness. To help clients with low literacy levels answer the surveys on their own, the ACASI surveys include audio that reads questions and the response options to the clients.
22H (ACF)	The nFORM (Information, Family Outcomes, Reporting, and Management) Data Collection and Reporting System	Healthy Marriage (HM) grantees use the nFORM system, along with web surveys for clients, to collect data at program exit on clients' attitudes toward marriage, as well as other information. To collect high-quality data, grantees receive ongoing training in data collection best practices through webinars, training videos, infographic-style "cheat sheets," in-person presentations, and bi-monthly virtual office hours. Grantees also receive individualized technical assistance through a ticketing system in nFORM, with assistance provided by email and phone calls. The use of ACASI

Measure ID	Data Source	Data Validation
		(audio computer-assisted self-interviewing) surveys further enhances the rigor of the client survey data. Clients complete web surveys on their own, which reduces responding in socially desirable ways and eliminates variation in how interviewers might ask questions. The web surveys also include automated skip patterns so that clients only answer questions that apply to them and "soft checks" that provide an additional prompt for clients to answer questions before skipping them as a way to encourage data completeness. To help clients with low literacy levels answer the surveys on their own, the ACASI surveys include audio that reads questions and the response options to the clients.
22I (ACF)	The nFORM (Information, Family Outcomes, Reporting, and Management) Data Collection and Reporting System	Healthy Marriage (HM) grantees use the nFORM system, along with web surveys for clients, to collect data at program exit on clients' attitudes toward marriage, as well as other information. To collect high-quality data, grantees receive ongoing training in data collection best practices through webinars, training videos, infographic-style "cheat sheets," in-person presentations, and bi-monthly virtual office hours. Grantees also receive individualized technical assistance through a ticketing system in nFORM, with assistance provided by email and phone calls. The use of ACASI (audio computer-assisted self-interviewing) surveys further enhances the rigor of the client survey data. Clients complete web surveys on their own, which reduces responding in socially desirable ways and eliminates variation in how interviewers might ask questions. The web surveys also include automated skip patterns so that clients only answer questions that apply to them and "soft checks" that provide an additional prompt for clients to answer questions before skipping them as a way to encourage data completeness. To help clients with low literacy

Measure ID	Data Source	Data Validation
		levels answer the surveys on their own, the ACASI surveys include audio that reads questions and the response options to the clients.
8F (ACL)	Protection and Advocacy for Individuals with Developmental Disabilities (PADD) Annual Program Performance Report (PPR).	Outcome data for each fiscal year are reported in PPRs submitted in January of the following fiscal year. Verification and validation of data occur through ongoing review and analysis of annual reports. Data collected in the PADD PPR is validated and verified by comparing the data against parameters of that field and also compared with previous year's data. In case of any outlier data, grantees are asked to verify and/or validate and provide ACL with an explanation and/or supporting documents.
ALZ.3 (ACL)	ACL's Dementia Capability System Quality Assurance tool.	Each fall grantees complete the tool to assess improvements in the dementia capability of their long-term services system. Technical assistance liaisons review grantee data for completeness and accuracy. A new on-line system will facilitate grantee completion of the tool, review and analysis.
2.3.8 (AHRQ)	Internal AHRQ performance management systems	Tools included in this measure will be made publicly available
2.6 (ASA)	The Employee Engagement Index is comprised of three subindices: Leaders Lead, Supervisors, and Intrinsic Work Experience. Each subindex is assessed through multiple questions on the Office of Personnel Management (OPM) Federal Employee Viewpoint Survey (FEVS) https://www.opm.gov/fevs/	Office of Personnel Management validates the data
2.8 (ASA)	Human Resources Enterprise Processing System (HREPS) and Business Intelligence Information System (BIIS)	Review and validated by OHR Director of Analytics
3.3 (ASA)	Risk Management Framework Portal (RMFP)	The HHS Office of Chief Information Director of Information Security validates these data.
3.5 (ASA)	PhishMe Solution and PhishMe Report	The HHS Office of Chief Information Director of Information Security validates these data.

Measure ID	Data Source	Data Validation
3.6 (ASA)	RiskVision: Ad Hoc Reports	The HHS Office of Chief Information Director of Information Security validates these data.
2.4.13a (ASPR)	For all performance measures related to licensure, emergency use authorization, and/or commercialization of medical countermeasures are captured either through approval from appropriate regulatory agencies such as the United States Food and Drug Administration (FDA) and/or associated host country regulatory licensing board. This information is publically available and has gone through rigorous review approval for the safety, efficacy, tolerability and immunogenicity of such medical countermeasure for the advancement of pandemic preparedness and critical lifesaving interventions. During emergency times, Emergency Use Authorization's (EUA) are assigned by the FDA to move forward certain lifesaving technologies in order to meet pandemic preparedness and response timelines. All EUAs are made public on the FDA website (https://www.fda.gov/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/MCMLegalRegulatoryandPolicyFramework/ucm182568.htm#current)	All data are checked against multiple databases to ensure accuracy and validation of the numbers reported. Contracts awarded and draft requests for proposal for industry comment are negotiated and issued, respectively, in accordance with Federal Acquisition Regulations (FAR) and the HHS Acquisition Regulations (HHSAR). Interagency Agreements are developed with federal laboratories to address specific advanced research questions. Contractors and awardees are required by contract terms and conditions to report on inventions, discovery, and other advancements in the advanced development of medical countermeasures. This information is used for quality assurance and control purposes to ensure data reported is accurate.

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Measure ID	Data Source	Data Validation
2.4.15b (ASPR)	Data sources for performance measure 2.4.15b are collected and reported from the number of executed awards made during the fiscal year as it relates to the advanced research and development of influenza vaccines and broad-spectrum therapeutics. Data sources will include www.USASpending.gov , www.fbo.gov , UFMS, and other government systems. BARDA staff are experts in analysis and report a great deal of accurate and complete data.	All data are checked against multiple databases to ensure accuracy and validation of the numbers reported. Contracts awarded and draft requests for proposal for industry comment are negotiated and issued, respectively, in accordance with Federal Acquisition Regulations (FAR) and the HHS Acquisition Regulations (HHSAR).
1.3.3a (CDC)	Behavioral Risk Factor Surveillance System (BRFSS) Behavioral Risk Factor Surveillance System (BRFSS), interviews conducted September-June for an influenza season (e.g., September 2011-June 2012 for the 2011-12 influenza season) and provided to ISD from NCCDPHP by August (e.g. August 2012 for the 2011-12 influenza season). Final results usually available by September (e.g. September 2012 for the 2011-12 influenza season). BRFSS is an on-going state-based monthly telephone survey which collects information on health conditions and risk behaviors from ~400,000 randomly selected persons ≥18 years among the non-institutionalized, U.S. civilian population. Numerator: BRFSS respondents were asked if they had received a 'flu' vaccine in the past 12 months, and if so, in which month and year. Persons reporting influenza vaccination from August through May (e.g., August 2011-May 2012 for the 2011-12 flu season) were considered vaccinated for the season. Persons reporting influenza vaccination in the past 12 months but with missing month or year of vaccination had month and year imputed from donor pools matched for week of interview, age group, state of residence and race/ethnicity. The cumulative proportion of persons receiving influenza vaccination coverage during August through May is estimated via Kaplan-Meier analysis in SUDAAN using monthly interview data collected September	Data validation methodology: Estimates from BRFSS are subject to the following limitations. First, influenza vaccination status is based on self or parental report, was not validated with medical records, and thus is subject to respondent recall bias. Second, BRFSS is a telephone-based survey and does not include households without telephone service (about 2% of U.S. households) and estimates prior to the 2011-12 influenza season did not include households with cellular telephone service only, which may affect some geographic areas and racial/ethnic groups more than others. Third, the median state CASRO BRFSS response rate was 54.4% in 2010, and nonresponse bias may remain after weighting adjustments. Fourth, the estimated number of persons vaccinated might be overestimated, as previous estimates resulted in higher numbers vaccinated than doses distributed.

Measure ID	Data Source	Data Validation
	through June. Denominator: Respondents age ≥18 years responding to the BRFSS in the 50 states and the District of Columbia with interviews conducted September-June for an influenza season (e.g., September 2011-June 2012 for the 2011-12 influenza season) and provided to ISD from NCCDPHP by August (e.g. August 2012 for the 2011-12 influenza season). Persons with unknown, refused or missing status for flu vaccination in the past 12 months are excluded.	
3.2.4b (CDC)	CDC's National Healthcare Safety Network (NHSN) and CDC's Emerging Infections Program (EIP) 's Healthcare-Associated Infections Community Interface (HAIC) activity surveillance for community-onset Clostridium difficile infections (CDI) reduction	NHSN data is validated by the Centers for Medicare & Medicaid Services (CMS) and state/local health departments. EIP data undergoes annual audits to ensure accuracy
3.3.3 (CDC)	National Healthcare Safety Network (NHSN)	Extensive cross-field edit checks are used for validation and incomplete records cannot be reported. Detailed instructions for completion of report forms ensure consistency across sites. Process and quality improvements occur through email updates and annual meetings.
4.6.2a (CDC)	US Census and Treasury; Alcohol Tobacco Tax and Trade Bureau (TTB), Monthly Statistical Reports, and the Census Bureau Annual Census Estimates	Data is pulled from public reports from US Census and Treasury, and validated through HHS and CDC calculations.
4.11.10a (CDC)	National Health and Nutrition Examination Survey (NHANES), CDC, NCHS	Data are validated by NCHS
4.11.10b (CDC)	National Health and Nutrition Examination Survey (NHANES).	NHANES data is validated by quality control standards.
7.2.6 (CDC)	CDC/NCHS, National Vital Statistics System, Mortality	See http://www.cdc.gov/nchs/nvss/about_nvss.htm. NVSS data are provided through contracts between NCHS and vital registration systems operated in

Measure ID	Data Source	Data Validation
		the various jurisdictions legally responsible for the registration of vital events including deaths.
8.B.1.4 (CDC)	National Notifiable Disease Surveillance System (NNDSS)	Data is validated by calculations at CDC based on the format of data transmissions received by CDC. The frequency of calculation and monitoring is at least yearly.
13.5.3 (CDC)	Reported as part of the Operational Readiness Review (ORR) data from 55 PHEP recipients	Quality assurance reviews with follow-up with recipients
MCR23 (CMS)	The Prescription Drug Event (PDE) data	CMS has a rigorous data quality program for ensuring the accuracy and reliability of the PDE data. The first phase in this process is on-line PDE editing. The purpose of on-line editing is to apply format rules, check for legal values, compare data in individual fields to other known information (such as beneficiary, plan, or drug characteristics) and evaluate logical consistency between multiple fields reported on the same PDE. On-line editing also enforces business order logic which ensures only one PDE is active for each prescription drug event. The second phase of our data quality program occurs after PDE data has passed all initial on-line edits and is saved in our data repository. We conduct a variety of routine and ad hoc data analysis of saved PDEs to ensure data quality and payment accuracy.
MCR36 (CMS)	Medicare Shared Savings Program Financial Reconciliation Reports; Master Data Management (MDM) System; Integrated Data Repository (IDR); TAP files; CCW claims data; CMS Office of the Actuary (OACT) annual Part A and B expenditure data	*Numerator:* Model payment actuals for CMS downside risk APMs based on model specific data, such as the number of aligned beneficiaries and annual per beneficiary spending. *Denominator:* The CMS Office of the Actuary (OACT) actual or estimated annual Part A and B expenditure. CMS staff and contractors provide beneficiary alignment and expenditure data to CMMI. Model teams and contractors use quality assurance measures and data cleaning, including an audit and validation

Measure ID	Data Source	Data Validation
		process of the programs that calculate the results to ensure the reliability of the results
MIP1 (CMS)	The Comprehensive Error Rate Testing (CERT) Program selects a random sample of Medicare Fee-for Service (FFS) claims from a population of claims submitted for Medicare Fee For Service payment. Complex medical review is performed on the sample of Medicare FFS claims to determine if the claims were properly paid under Medicare coverage, coding, and billing rules.	The CERT program is monitored for compliance by CMS through monthly reports from the contractors. In addition, the HHS Office of the Inspector General conducts annual reviews of the CERT program and its contractors.
MIP5 (CMS)	The Part C Improper Payment Measurement process measures the extent to which diagnostic data used in payment is substantiated by medical records submitted to CMS by MAOs. The diagnostic data is used to determine risk adjusted payments made to MAOs.	Data used to determine the Part C program improper payment rate is reviewed by several contractors. The Part C Improper Payment Measurement is based on data obtained from a rigorous Part C Improper Payment Measurement process in which medical records are reviewed by independent coding entities in the process of confirming that medical record documentation supports risk adjustment diagnosis data submitted by Medicare Advantage Organizations for payment.
MIP6 (CMS)	The payment error measurement in the Part D program is an estimate based on differences between Prescription Drug Event (PDE) records and a prescription or medication order. A PDE record represents a Part D claim for a prescription filled by a beneficiary.	For the Part D payment error estimate, the data to validate payments comes from multiple internal and external sources, including CMS' enrollment and payment files. A key data source is CMS' PDE Validation process, which validates PDEs through contractor review of supporting documentation submitted to CMS by Part D sponsors.
MIP9.1 (CMS)	As part of a national contracting strategy, adjudicated claims data, medical policies, and eligibility policies are gathered from the states for purposes of conducting medical reviews, data processing reviews, and eligibility reviews on a sample of the claims paid in each state.	CMS and our contractors are working with the 17 States to ensure that the Medicaid and CHIP universe data and sampled claims are complete and accurate and contain the data needed to conduct the reviews. In addition, the OIG conducts annual reviews of the PERM program and its contractors.

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Measure ID	Data Source	Data Validation
MIP9.2 (CMS)	As part of a national contracting strategy, adjudicated claims data, medical policies, and eligibility policies are gathered from the states for purposes of conducting medical reviews, data processing reviews, and eligibility reviews on a sample of the claims paid in each state.	CMS and our contractors are working with the 17 states to ensure that the Medicaid and CHIP universe data and sampled claims are complete and accurate and contain the data needed to conduct the reviews. In addition, the OIG conducts annual reviews of the PERM program and its contractors.
MIP12 (CMS)	Savings attributable to FPS edits.	The FPS contractor keeps a data repository of all Medicare FFS claim and claim line denials or rejections that have occurred as a result of an FPS edit, and CMS monitors the edits to ensure that FPS is adjudicating the claims as intended. CMS merges data from FPS edits and Medicare claims to calculate net savings, and conducts quality assurance of the results.
MMB2 (CMS)	CMS Geographic Variation Database (Foundation of the Chronic Conditions Warehouse). This performance measure defines a readmission as a case of a full-benefit Medicare-Medicaid enrollee in fee-for-service who is discharged from an acute care hospital and admitted to the same or another acute care hospital within thirty days from the date of the index admission discharge. The formula is the number of readmissions per 1000 eligible beneficiaries. CMS uses a hybrid method of extracting readmissions data on Medicare-Medicaid enrollees, which incorporates elements of the Partnership for Patients readmission measure and the Medicare Hospital Readmissions Reduction Program (HRRP) measure methodologies (see MCR26 for more information). The methodology differs from MCR26 in that readmission data on all	Data are validated using parallel coding, reasonableness checks on each file, version-to-version changes by variable and service types, and year-over-year comparisons.

Measure ID	Data Source	Data Validation
	full-benefit Medicare-Medicaid enrollees in FFS is analyzed, as opposed to only those 65 years old and older, in order to capture the experience of those with disabilities under age 65 years.	
MSC5 (CMS)	CMS reports the percentage of long-stay nursing home residents that received an antipsychotic medication with a quality measure (QM) derived from the Minimum Data Set (MDS).	CMS reports the percentage of long-stay nursing home residents who received an antipsychotic medication with a quality measure derived from the MDS. The MDS is the source of the data used to calculate this measure. The MDS is considered part of the medical record. The nursing home must maintain the MDS and submit it electronically to CMS for every resident of the certified part of the nursing home. For this goal, CMS reports the prevalence of antipsychotic use in the last three months of the fiscal year. The numerator consists of long stay residents receiving an antipsychotic medication on the most recent assessment. The denominator is all long-stay nursing home residents, excluding residents with schizophrenia, Tourette's syndrome, or Huntington's disease. Residents are considered to be long-stay residents if they have resided in the nursing home for 101 or more days. The baseline number reflects the prevalence of use in the last quarter of CY 2011. It was selected because it was the last quarter in the pre intervention period.
QIO7.3 (CMS)	Nursing Home Compare Data	Data for nursing home compare are validated as part of the process to display nursing home compare 5 star rating scores, and are comprised of Medicare claims data and MDS data. For this measure, underlying data for the 5 star rating were analyzed, and baseline and targets were set to focus improvements on

Measure ID	Data Source	Data Validation
		current one star value nursing homes to raise the overall quality of care for nursing homes assessed, specifically one star homes.
QIO12 (CMS)	Nursing Home Compare and Quality Certification and Oversight Reports (QCOR) Website to count the deficiency tags for F880+. DARRT database where TR-QIIs are submitted referred, and tracked.	Under the QCOR website/Nursing Home providers/Nursing Home Infection Control Surveys, for the CCNs referred in DARRT will be assessed for F880 deficiency tags annually. The data in these reports, including provider and supplier counts and percentages, are valid for the subset of providers or suppliers for which there are survey records in CMS' Certification and Survey Provider Enhanced Reports (CASPER). CASPER stores a limited number of survey records for each active or terminated provider or supplier. Older records may not be available for use in these reports.
QIO13.1 (CMS)	**CDC National Healthcare Safety Network (NHSN):** NHSN is a secure, Internet-based surveillance system that expands and integrates patient and healthcare personnel safety surveillance systems. NHSN enables healthcare facilities to collect and use data about Healthcare-associated infections (HAIs), adherence to clinical practices known to prevent HAIs. **Catheter-associated UTI (CAUTI) Metrics:** A urinary tract infection where an indwelling urinary catheter was in place for more than 2 consecutive days in an inpatient location on the date of event, with day of device placement being Day 1, AND an indwelling urinary catheter was in place on the date of event or the day before. **CAUTI SIRs** = # of Observed CAUTIs / # of Predicted CAUTIs	**CDC NHSN Data Validation:** The NHSN Validation Guidance and Toolkit is used to assure high-quality surveillance data through accountability and by identifying, understanding, and correcting reporting problems. Healthcare facilities participating in HAI surveillance via NHSN's data quality toolkit are required to follow NHSN methods, definitions and criteria. The toolkit describes implementation practices for reporting facilities that support high quality surveillance data when reporting to NHSN.

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Measure ID	Data Source	Data Validation
QIO13.2 (CMS)	**CDC NHSN/CDI Metrics:** The positive C. difficile specimen in a healthcare facility-onset (HO) for the admitting facility if the specimen collection date was ≥ 4 days after inpatient admission to the facility. **CDI SIRs =** # of all Incident CDI Lab ID Events identified in a non-IRF/IPF location >3 days after admission to the facility # of predicted Incident healthcare facility onsite(HO) CDI Lab ID Events	**CDC NHSN Data Validation:** The NHSN Validation Guidance and Toolkit is used to assure high-quality surveillance data through accountability and by identifying, understanding, and correcting reporting problems. Healthcare facilities participating in HAI surveillance via NHSN's data quality toolkit are required to follow NHSN methods, definitions and criteria. The toolkit describes implementation practices for reporting facilities that support high quality surveillance data when reporting to NHSN.
291101 (FDA)		
292203 (FDA)		
2010.03 (HRSA)	HRSA Bureau of Clinician Recruitment Service's Management Information Support System (BMISS)	BMISS is internally managed with support from the NIH which provides: Data Management Services, Data Requests and Dissemination, Analytics, Data Governance and Quality, Project Planning and Requirements Development, Training, and Process Improvement.
4000.03 (HRSA)	The RWHAP Services Report (RSR). The RSR contains client-level data and enables the Program to un-duplicate the estimated number of people who received at least one RWHAP-funded service within the reporting period.	This web-based data collection method communicates errors and warnings in the built-in validation process. To ensure data qality the Program conducts data verification for all RSR submissions. Recipients receive reports detailing items in need of correction and instructions for submiting revised data. The web system has an arrray of reports available through which the grantees and their funded providers can identify data issues that need to be resolved. In addition, the Program provides technical assistance and training during and after the submission period to address quality issues.

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Measure ID	Data Source	Data Validation
6020.01 (HRSA)	Reported by grantees through the Program's Performance Improvement Measurement System.	Validated by project officers.
81 (IHS)	IHS Integrated Data Collection System Data Mart	Monthly review of reports for completeness regarding full participation and monitoring of outliers.
MH-1 (IHS)	Indian Health Service Performance and Evaluation System (IHPES).	Reports generated from the IHS Performance and Evaluation System (IHPES) are reviewed and verified periodically to assure data quality control and monitor percent change outliers which may indicate error.
SRO-2.1 (NIH)	Publications, administrative records and/or public documents	Ni K, Luo T, Culbert A, Kaufmann M, Jiang X, Lin W. Nanoscale Metal-Organic Framework Co-delivers TLR-7 Agonists and Anti-CD47 Antibodies to Modulate Macrophages and Orchestrate Cancer Immunotherapy. J Am Chem Soc. 2020. PMID: 32658476 Luo T, Nash GT, Xu Z, Jiang X, Liu J, Lin W. Nanoscale Metal-Organic Framework Confines Zinc-Phthalocyanine Photosensitizers for Enhanced Photodynamic Therapy. J Am Chem Soc. 2021. PMID: 34424712 Ni K, Lan G, Guo N, Culbert A, Luo T, Wu T, Weichselbaum RR, Lin W. Nanoscale metal-organic frameworks for x-ray activated in situ cancer vaccination. Sci Adv. 2020. PMID: 33008911
SRO-2.9 (NIH)	Publications, databases, administrative records and/or public documents	**NIAID News Releases:** • NIH Launches Large Clinical Trials of Antibody-Based HIV Prevention, https://www.niaid.nih.gov/news-events/nih-launches-large-clinical-trials-antibody-based-hiv-prevention • High Uptake and Use of Vaginal Ring for HIV Prevention Observed in Open-Label Study, https://www.niaid.nih.gov/news-events/high-uptake-and-use-vaginal-ring

Measure ID	Data Source	Data Validation
		-hiv-prevention-observed-open-label-study • Most Women Use Vaginal Ring for HIV Prevention in Open-Label Study. https://www.niaid.nih.gov/news-events/most-women-use-vaginal-ring-hiv-prevention-open-label-study • Microbicides To Block Transmission of HIV, https://www.niaid.nih.gov/diseases-conditions/microbicides • Vaginal Ring May Cut HIV Infection Risk if Used Consistently, https://www.niaid.nih.gov/news-events/vaginal-ring-may-cut-hiv-infection-risk-if-used-consistently • Women Report Vaginal Ring for Preventing HIV Had Little Effect on Sexual Intercourse, https://www.nih.gov/news-events/news-releases/women-report-vaginal-ring-preventing-hiv-had-little-effect-sexual-intercourse • Vaginal Ring for HIV Prevention Receives Positive Opinion from European Regulator, https://www.niaid.nih.gov/news-events/vaginal-ring-hiv-prevention-receives-positive-opinion-european-regulator • Long-Acting Injectable Form of HIV Prevention Outperforms Daily Pill in NIH Study, https://www.niaid.nih.gov/news-events/long-acting-injectable-form-hiv-prevention-outperforms-daily-pill-nih-study • NIH Study Finds Long-Acting Injectable Drug Prevents HIV Acquisition in Cisgender Women, https://www.niaid.nih.gov/news-events/statement-nih-study-finds-long-acting-injectable-drug-prevents-hiv-acquisition?utm_campaign=+44737

Measure ID	Data Source	Data Validation
		811&utm_content=&utm_medium=email&utm_source=govdelivery&utm_term= • Antibody Infusions Prevent Acquisition of Some HIV Strains, NIH Studies Find, https://www.niaid.nih.gov/news-events/antibody-infusions-prevent-acquisition-some-hiv-strains-nih-studies-find **HPTN News Releases:** • Long-Acting Injectable Cabotegravir for PrEP Well Tolerated in HPTN 077: Results Support Dosing Regimens in HPTN 083 and HPTN 084. https://www.hptn.org/news-and-events/press-releases/long-acting-injectable-cabotegravir-for-prep-well-tolerated-hptn-077 • HIV Prevention Trials Network (HPTN) Announces Initiation of HPTN 084: First Large-Scale Study in Women of a Long-Acting Injectable to Prevent HIV, https://www.hptn.org/news-and-events/press-releases/hiv-prevention-trials-network-hptn-announces-initiation-of-hptn-084 • Long-acting injectable cabotegravir is highly effective for the prevention of HIV infection in cisgender men and transgender women who have sex with men, https://www.hptn.org/news-and-events/press-releases/long-acting-injectable-cabotegravir-highly-effective-prevention-hiv • HPTN 083 Study Demonstrates Superiority of Cabotegravir for the Prevention of HIV, https://www.hptn.org/news-and-event

Measure ID	Data Source	Data Validation
		s/press-releases/hptn-083-study-dem onstrates-superiority-cabotegravir- prevention-hiv • Amp Study Results https://ampstudy.org/results • Most advanced clinical trials testing broadly neutralizing antibody against HIV demonstrate efficacy against sensitive strains, https://www.hptn.org/news-and-event s/press-releases/most-advanced-clin ical-trials-testing-broadly-neutral izing-antibody **MTN News Releases:** • Women's use of vaginal ring is higher in open-label study, as is level of HIV protection, http://www.mtnstopshiv.org/news/wom ens-use-vaginal-ring-higher-open-la bel-study-level-hiv-protection • Questions and Answers: HOPE – HIV Open-label Prevention Extension Study. https://mtnstopshiv.org/news/questi ons-and-answers-hope-hiv-open-label -prevention-extension-study • Results of open-label study of a vaginal ring for HIV prevention suggest women are interested in and willing to use it, https://mtnstopshiv.org/news/result s-open-label-study-vaginal-ring-hiv -prevention-suggest-women-are-inter ested-and-willing • Monthly vaginal ring advances toward potential approval as new HIV prevention method for women, https://www.mtnstopshiv.org/news/mo nthly-vaginal-ring-advances-toward- potential-approval-new-hiv-preventi on-method-women

Measure ID	Data Source	Data Validation
		• Study finds adolescent girls and young women in Africa will use HIV prevention products, https://www.mtnstopshiv.org/news/study-finds-adolescent-girls-and-young-women-africa-will-use-hiv-prevention-products • Second early phase study of 90-day vaginal ring containing dapivirine and contraceptive shows promise as dual-purpose product for preventing both HIV and pregnancy, https://mtnstopshiv.org/news/second-early-phase-study-90-day-vaginal-ring-containing-dapivirine-and-contraceptive-shows **Publications:** • Two Randomized Trials of Neutralizing Antibodies to Prevent HIV-1 Acquisition, N Engl J Med. 2021 Mar 18;384(11):1003-1014. doi: 10.1056/NEJMoa2031738. • Feasibility and Successful Enrollment in a Proof-of-Concept HIV Prevention Trial of VRC01, a Broadly Neutralizing HIV-1 Monoclonal Antibody, J Acquir Immune Defic Syndr. 2021 May 1;87(1):671-679. doi: 10.1097/QAI.0000000000002639. • Characterization of HIV infection in cisgender men and transgender women who have sex with men receiving injectable cabotegravir for HIV prevention: HPTN 083, J Infect Dis. 2021 Mar 19;jiab152. doi: 10.1093/infdis/jiab152. Online ahead of print. • Safety, tolerability, and pharmacokinetics of long-acting injectable cabotegravir in low-risk HIV-uninfected individuals: HPTN 077, a Phase 2a randomized controlled trial. Landovitz RJ, Li S, Grinsztejn B, Dawood H, Liu AY, Magnus M, et al. (2018) PLoS Med 15(11): e1002690. https://doi.org/10.1371/journal.pmed.1002690

Measure ID	Data Source	Data Validation
		• Phase 1 pharmacokinetics and safety study of extended duration dapivirine vaginal rings in the United States. Liu A, et. al., J Int AIDS Soc. 2021 Jun;24(6):e25747. doi: 10.1002/jia2.25747. • Acceptability of the Dapivirine Vaginal Ring for HIV-1 Prevention and Association with Adherence in a Phase III Trial. Mayo AJ, et. al., AIDS Behav 2021 Aug;25(8):2430-2440. PMCID: PMC8222015.
SRO-2.12 (NIH)	Publications, databases, administrative records and/or public documents.	Resources from awards supporting technology sharing, dissemination, and integration: https://braininitiative.nih.gov/brain-programs/dissemination-program/u24-projects New publications from awards supporting technology sharing, dissemination, and integration: NS109107: PMID 33408990; NS109103: PMIDs 33957232, 34428572; NS113637: PMIDs 33941932, 33152715; NS109113: PMID 33185319 New publications from PPP awards: PMIDs: 34536230, 34532716, 34482000, 34381344, 34372446, 34320481, 34313221, 34289456, 34237680, 34017308, 33991713, 33960894, 33953663, 33941932, 33937916, 33920070, 33913499, 33826240, 33766969, 33584227, 33579874, 33484503, 33462446, 33377501, 33310676, 33301569, 33268512, 33192400, 33157435, 33152715, 33045357, 32906005, 32895713, 32762005, 32746065, 32634599, 32622060, 32418613 BICCN publications: https://www.nature.com/collections/cicghhedd
SRO-4.9 (NIH)	Grant administrative record and public press release from funded company	Trials conducted within the HEAL Initiative:

Measure ID	Data Source	Data Validation
		• Opioid Vaccine: NCT04458545; UG3DA047711 • GABA receptor positive allosteric modulator medication: NCT04447287; UG3DA051392 • Orexin-1 receptor antagonist NCT04413552; UG3DA050308 Publications: • Antoine, Denis; Huhn, Andrew S; Strain, Eric C; Turner, Gavin; Jardot, Jasmyne; Hammond, Alexis S; Dunn, Kelly E. Method For Successfully Inducting Individuals Who Use Illicit Fentanyl Onto Buprenorphine/Naloxone. Am J Addict. 2021; 30(1): 83-87. • Tabakoff, Boris; Hoffman, Paula L. J : Controlling The "Opioid Epidemic": A Novel Chemical Entity (NCE) To Reduce Or Supplant Opiate Use For Chronic Pain. Psychiatr Brain Sci. 2020. • Cao, Danni; Huang, Peng; Chiu, Yi-Ting; Chen, Chongguang; Wang, Huiqun; Li, Mengchu; Zheng, Yi; Ehlert, Frederick J; Zhang, Yan; Liu-Chen, Lee-Yuan.Comparison Of Pharmacological Properties Between The Kappa Opioid Receptor Agonist Nalfurafine And 42B, Its 3-Dehydroxy Analogue: Disconnect Between In Vitro Agonist Bias And In Vivo Pharmacological Effects. ACS Chem Neurosci. 2020; 11(19): 3036-3050. • Huang, Boshi; St Onge, Celsey M; Ma, Hongguang; Zhang, Yan. Design Of Bivalent Ligands Targeting Putative GPCR Dimers. Drug Discov Today. 2021; 26(1): 189-199. • France, Charles P; Ahern, Gerard P; Averick, Saadyah; Disney, Alex; Enright, Heather A; Esmaeli-Azad, Babak; Federico, Arianna; Gerak, Lisa R; Husbands, Stephen M; Kolber, Benedict; Lau, Edmond Y; Lao, Victoria; Maguire, David R; Malfatti, Michael A; Martinez,

Measure ID	Data Source	Data Validation
		Girardo; Mayer, Brian P; Pravetoni, Marco; Sahibzada, Niaz; Skolnick, Phil; Snyder, Evan Y; Tomycz, Nestor; Valdez, Carlos A; Zapf, Jim.Countermeasures For Preventing And Treating Opioid Overdose. Clin Pharmacol Ther. 2021; 109(3): 578-590. • Douton, Joaquin E; Norgren, Ralph; Grigson, Patricia Sue.Effects Of A Glucagon-like Peptide-1 Analog On Appetitive And Consummatory Behavior For Rewarding And Aversive Gustatory Stimuli In Rats. Physiol Behav. 2021; 229(): 113279. • Park, Kinam; Otte, Andrew; Sharifi, Farrokh; Garner, John; Skidmore, Sarah; Park, Haesun; Jhon, Young Kuk; Qin, Bin; Wang, Yan.Formulation Composition, Manufacturing Process, And Characterization Of Poly(lactide-co-glycolide) Microparticles. Control Release. 2021; 329(): 1150-1161. • Hammock, Bruce D; McReynolds, Cindy B; Wagner, Karen; Buckpitt, Alan; Cortes-Puch, Irene; Croston, Glenn; Lee, Kin Sing Stephen; Yang, Jun; Schmidt, William K; Hwang, Sung Hee. Movement To The Clinic Of Soluble Epoxide Hydrolase Inhibitor EC5026 As An Analgesic For Neuropathic Pain And For Use As A Nonaddictive Opioid Alternative. J Med Chem. 2021; 64(4): 1856-1872. • Jimenez Jr, Victor M; Castaneda, Gabriel; France, Charles P. Methocinnamox Reverses And Prevents Fentanyl-Induced Ventilatory Depression In Rats. J Pharmacol Exp Ther. 2021; 377(1): 29-38. • Chear, Nelson Jeng-Yeou; León, Francisco; Sharma, Abhisheak; Kanumuri, Siva Rama Raju; Zwolinski, Grant; Abboud, Khalil A; Singh, Darshan; Restrepo, Luis F; Patel, Avi; Hiranita, Takato; Ramanathan, Surash; Hampson, Aidan J; McMahon, Lance R; McCurdy, Christopher R. Exploring The Chemistry Of Alkaloids From Malaysian Mitragyna Speciosa (Kratom) And The Role Of Oxindoles On Human Opioid Receptors. J Nat Prod. 2021; 84(4): 1034-1043.

Measure ID	Data Source	Data Validation
		• Sharifi, Farrokh; Meqbil, Yazan J; Otte, Andrew; Gutridge, Anna M; Blaine, Arryn T; van Rijn, Richard M; Park, Kinam. Engineering Quick- And Long-acting Naloxone Delivery Systems For Treating Opioid Overdose.Pharm Res. 2021; 38(7): 1221-1234. • Komla, Essie; Torres, Oscar B; Jalah, Rashmi; Sulima, Agnieszka; Beck, Zoltan; Alving, Carl R; Jacobson, Arthur E; Rice, Kenner C; Matyas, Gary R.Effect Of Preexisting Immunity To Tetanus Toxoid On The Efficacy Of Tetanus Toxoid-Conjugated Heroin Vaccine In Mice. Vaccines (Basel). 2021; 9(6): . • Chakraborty, Soumen; Uprety, Rajendra; Daibani, Amal E; Rouzic, Valerie L; Hunkele, Amanda; Appourchaux, Kevin; Eans, Shainnel O; Nuthikattu, Nitin; Jilakara, Rahul; Thammavong, Lisa; Pasternak, Gavril W; Pan, Ying-Xian; McLaughlin, Jay P; Che, Tao; Majumdar, Susruta. Kratom Alkaloids As Probes For Opioid Receptor Function: Pharmacological Characterization Of Minor Indole And Oxindole Alkaloids From Kratom. ACS Chem Neurosci. 2021; 12(14): 2661-2678. • Corrie, Lu Wenchi; Stokes, Clare; Wilkerson, Jenny L; Carroll, F Ivy; McMahon, Lance R; Papke, Roger L.Nicotinic Acetylcholine Receptor Accessory Subunits Determine The Activity Profile Of Epibatidine Derivatives. Mol Pharmacol. 2020; 98(4): 328-342. • Youngblood, Beth; Li, Kevin; Gehlert, Donald R; Medina, Julio C; Schwartz, Neil. A Novel Maintenance Therapeutic For Opioid Use Disorder.J Pharmacol Exp Ther. 2021; 378(2): 133-145. • Chambers, R Andrew; Toombs, Christopher. Deep Network Pharmacology: Targeting Glutamate Systems As Integrative Treatments For Jump-Starting Neural Networks And Recovery Trajectories. J Psychiatr Brain Sci. 2021.

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Measure ID	Data Source	Data Validation
SRO-5.3 (NIH)	Publications	**ADSP Banner Publications** *In Press* • Xue D, et al. Large-scale sequencing studies expand the known genetic architecture of Alzheimer's Disease. [In press]. 2021. • Park J, et al. A novel missense mutation in *SHARPIN* is associated with Alzheimer's disease. Transl Psychiatry. [in press] 2021. **Cohorts for Heart and Aging Research in Genomic Epidemiology Consortium (CHARGE)** • de Rojas I, et al. Common variants in Alzheimer's disease and risk stratification by polygenic risk scores. Nat Commun. 2021 Jun 7;12(1):3417. doi: 10.1038/s41467-021-22491-8. PMID: 34099642; PMCID: PMC8184987. • Akinyemi RO, et al. Dementia in Africa: Current evidence, knowledge gaps, and future directions. Alzheimers Dement. 2021 Sep 27. doi: 10.1002/alz.12432. Epub ahead of print. PMID: 34569714. **The Familial Alzheimer Sequencing (FASe) Project** • Moreno-Grau S, et al. Long runs of homozygosity are associated with Alzheimer's disease. Transl Psychiatry. 2021;11(1):142. doi: 10.1038/s41398-020-01145-1. PubMed PMID: 33627629. • Kirola L, et al. Lack of evidence supporting a role for DPP6 sequence variants in Alzheimer's disease in the European American population. Acta Neuropathol. 2021.

Measure ID	Data Source	Data Validation
		doi: 10.1007/s00401-021-02271-w. PubMed PMID: 33591372. **Consortium for Alzheimer's REsearch on Alzheimer's Disease (CADRE)** • Patel D, et al. Set-based rare variant expression quantitative trait loci associated with Alzheimer disease in human blood and brain. Genes 2021; 12:419. https://doi.org/10.3390/genes120304 19 • Patel D, et al. Cell-type-specific expression quantitative trait loci associated with Alzheimer disease in blood and brain tissue. Transl Psychiatry. 2021. PubMed Central PMCID: PMC8079392. **NIA-LOAD (U24AG056270)** ***In Press*** • Reyes-Dumeyer D. The National Institute on Aging Late Onset Alzheimer's Disease Family Based Study: A Resource for Genetic Discovery. [in press] 2021. **Infrastructure and NIAGADS/GCAD** • Amlie-Wolf A, et al. Using INFERNO to Infer the Molecular Mechanisms Underlying Noncoding Genetic Associations. Methods Mol Biol. 2021; 2254:73-91. doi: 10.1007/978-1-0716-1158-6_6. PubMed PMID: 33326071.

Measure ID	Data Source	Data Validation
		U01 Awards ***U01AG057659 - Whole Genome Sequencing in Ethnically Diverse Cohorts for the ADSP Follow-Up Study (FUS)*** • Griswold A, et al. Increased APOE epsilon4 expression is associated with the difference in Alzheimer's disease risk from diverse ancestral backgrounds. Alzheimers Dement. 2021. doi: 10.1002/alz.12287. PubMed PMID: 33522086. ***U01AG058635 - Genomic approach to identification of microglial networks involved in Alzheimer disease risk*** • Wu H, et al. Heterogeneous effects of genetic risk for Alzheimer's disease on the phenome. Transl Psychiatry. 2021 Jul 23;11(1):406. doi: 10.1038/s41398-021-01518-0. PMID: 34301914; PMCID: PMC8302633. ***U01AG058635 and U01AG052411 - Genomic approach to identification of microglial networks involved in Alzheimer disease risk and Identification and characterization of AD risk networks using multi-dimensional omics data*** • Lyon M, et al. The variant call format provides efficient and robust storage of GWAS summary statistics. Genome Biol. 2021;22(1):32. doi: 10.1186/s13059-020-02248-0. PubMed PMID: 33441155; PubMed Central PMCID: PMC7805039. ***AI4AD (U01AG068057) - Ultrascale Machine Learning to Empower Discovery in Alzheimers Disease Biobanks***

Measure ID	Data Source	Data Validation
		• Chia R, et al. Genome sequencing analysis identifies new loci associated with Lewy body dementia and provides insights into its genetic architecture. Nat Genet. 2021;53(3):294-303. doi: 10.1038/s41588-021-00785-3. PubMed PMID: 33589841; PubMed Central PMCID: PMC7946812. **R01s and Other Mechanisms** ***RF1AG044546*** • Yan Q, et al. Genome-wide association study of brain amyloid deposition as measured by Pittsburgh Compound-B (PiB)-PET imaging. Mol Psychiatry. 2021 Jan;26(1):309-321. doi: 10.1038/s41380-018-0246-7. Epub 2018 Oct 25. PMID: 30361487; PMCID: PMC6219464.

SAMHSA Data Source and Validation Table

Agency Program: Medication-Assisted Therapy (MAT)

Measure ID	Data Source	Data Validation
2.3.19K (SAMHSA)	This data presents national- and state-level data from the Treatment Episode Data Set (TEDS) for admissions and discharges occurring in specified time periods that summarizes demographic information and the characteristics and outcomes of treatment for alcohol and/or drug use among clients aged 12 years and older in facilities that report to individual state administrative data systems.	These facilities are surveyed annually about the nature of treatment received to develop the Treatment Episodes Data Set. Both of these activities were designed and implemented by specialized methodologists to ensure data quality.

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Measure ID	Data Source	Data Validation
2.3.19L (SAMHSA)	National Survey on Drug Use and Health (NSDUH)	NSDUH uses audio computer-assisted self-interviewing to provide the respondent with a highly private and confidential mode for responding to questions in order to increase the level of honest reporting of illicit drug use and other sensitive behaviors. Mental Health Services is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health.
2.3.19O (SAMHSA)	National Survey on Drug Use and Health (NSDUH	NSDUH uses audio computer-assisted self-interviewing to provide the respondent with a highly private and confidential mode for responding to questions in order to increase the level of honest reporting of illicit drug use and other sensitive behaviors. ` Treatment for depression is defined as seeing or talking to a health or alternative service professional or using prescription medication for depression in the past year.