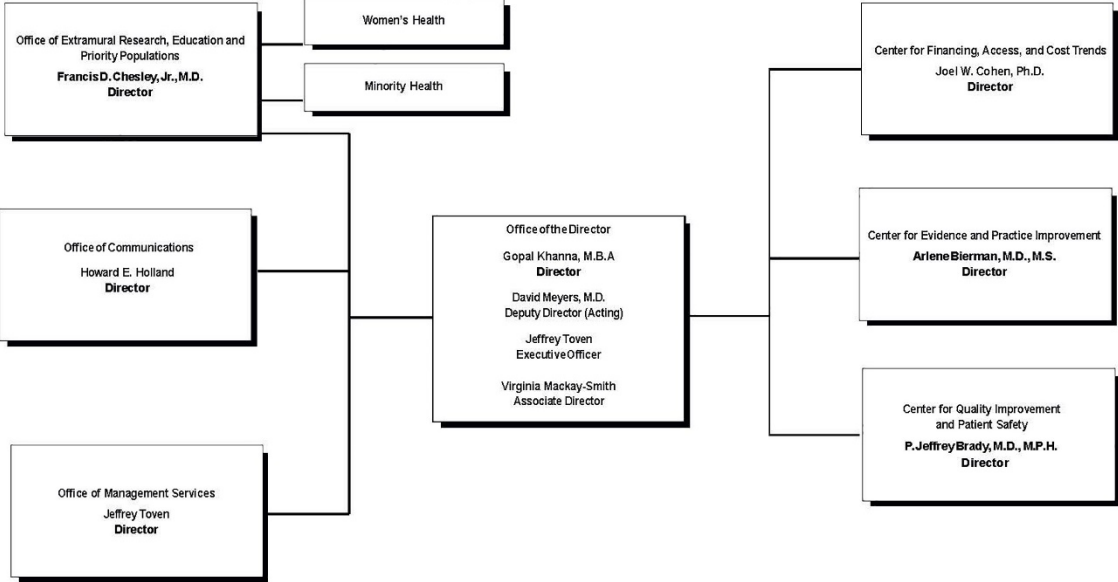


DEPARTMENT OF HEALTH AND HUMAN SERVICES NATIONAL
INSTITUTES OF HEALTH

National Institute for Research on Safety and Quality (NIRSQ)

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**NATIONAL INSTITUTES OF HEALTH
National Institute for Research on
Safety and Quality
(NIRSQ)**



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NATIONAL INSTITUTE FOR RESEARCH ON SAFETY AND QUALITY

For carrying out titles III and IX of the PHS Act, part A of title XI of the Social Security Act, and section 1013 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, \$256,660,000: Provided, That section 947(c) of the PHS Act shall not apply in fiscal year 2021: Provided further, That in addition, amounts received from Freedom of Information Act fees, reimbursable and interagency agreements, and the sale of data shall be credited to this appropriation and shall remain available until expended.

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Amounts Available for Obligation ^{1/}

(Dollars in Thousands)

<u>General Fund Discretionary Appropriation:</u>	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget
Appropriation (L/HHS, Ag, or Interior).....	\$338,000	\$338,000	\$256,660
Across-the-board reductions (L/HHS, Ag, or Interior).....			
Subtotal, Appropriation (L/HHS, Ag, or Interior).....			
Rescission.....			
Reappropriation.....			
Proposed Supplemental Appropriation.....			
Proposed Rescission.....			
Proposed Reappropriation.....	_____	_____	_____
Subtotal, adjusted appropriation.....			
Secretary's transfer to ACF.....	\$ (1,139)	\$-	\$ -
Comparable transfer from:.....	_____	_____	_____
Subtotal, adjusted general fund discr. appropriation.....	\$ 336,861	\$ 338,000	\$ 256,660
 <u>Trust Fund Discretionary Appropriation:</u>			
Appropriation Lines.....			
Transfer Lines.....			
Subtotal, adjusted trust fund discr. Appropriation.....			
 Total, Discretionary Appropriation.....			
 <u>Mandatory Appropriation:</u>			
Appropriation Lines.....			
Transfer Lines (non-add).....	\$ 115,937	\$ 106,493	\$ 98,452
Subtotal, adjusted mandatory. appropriation.....	\$ 115,937	\$106,493	\$ 98,452
 <u>Offsetting collections from:</u>			
Unobligated balance, start of year.....			
Unobligated balance, end of year.....			
Unobligated balance, lapsing.....	\$ 108	\$ -	
	_____	_____	_____
Total obligations.....	\$ 336,753	\$ 444,493	\$ 355,112

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

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Mechanism Summary Table by Portfolio ^{1/ 2/}

	FY 2019		FY 2020		FY 2021	
	Final		Enacted		President's Budget	
	No.	Dollars	No.	Dollars	No.	Dollars
RESEARCH GRANTS						
Non-Competing						
Patient Safety	62	23,969,291	80	34,657,899	76	35,872,824
Health Serv Res, Data & Diss.....	155	40,730,913	158	46,018,949	155	41,346,181
Health Information Technology.....	29	10,098,688	38	11,972,942	0	0
U.S. Preventive Services Task Force.....	0	0	0	0	0	0
Medical Expenditure Panel Survey.....	0	0	0	0	0	0
Total Non-Competing	246	74,798,892	276	92,649,709	231	77,219,005
New & Competing						
Patient Safety	35	16,160,300	18	8,406,206	6	2,721,356
Health Serv Res, Data & Diss.....	81	17,935,348	61	13,553,000	20	5,794,819
Health Information Technology.....	19	4,346,324	12	2,760,000	0	0
U.S. Preventive Services Task Force.....	0	0	0	0	0	0
Medical Expenditure Panel Survey.....	0	0	0	0	0	0
Total New & Competing.....	135	38,441,972	91	24,719,206	26	8,516,175
RESEARCH GRANTS						
Patient Safety	97	40,129,591	98	43,064,105	82	38,594,180
Health Serv Res, Data & Diss.....	236	58,666,261	219	59,571,949	175	47,141,000
Improving Maternal Morbidity.....		0		0		0
Health Information Technology.....	48	14,445,012	50	14,732,942	0	0
U.S. Preventive Services Task Force.....	0	0	0	0	0	0
Medical Expenditure Panel Survey.....	0	0	0	0	0	0
TOTAL, RESEARCH GRANTS.....	381	113,240,864	367	117,368,996	257	85,735,180
CONTRACTS/IAAs						
Patient Safety		31,902,409		29,211,895		21,332,820
Health Serv Res, Data & Diss.....		37,293,739		36,712,051		9,500,000
Health Information Technology.....		1,998,988		1,767,058		0
Improving Maternal Morbidity.....		0		0		7,350,000
U.S. Preventive Services Task Force.....		11,610,000		11,649,000		7,400,000
Medical Expenditure Panel Survey.....		<u>69,755,000</u>		<u>69,991,000</u>		<u>71,791,000</u>
TOTAL CONTRACTS/IAAs		152,560,136		149,331,004		117,373,820
RESEARCH MANAGEMENT.....		71,060,000		71,300,000		53,551,000
GRAND TOTAL						
Patient Safety		72,032,000		72,276,000		59,927,000
Health Serv Res, Data & Diss.....		95,960,000		96,284,000		56,641,000
Improving Maternal Morbidity.....		0		0		7,350,000
Health Information Technology.....		16,444,000		16,500,000		0
U.S. Preventive Services Task Force.....		11,610,000		11,649,000		7,400,000
Medical Expenditure Panel Survey.....		69,755,000		69,991,000		71,791,000
Research Management.....		<u>71,060,000</u>		<u>71,300,000</u>		<u>53,551,000</u>
GRAND TOTAL.....		336,861,000		338,000,000		256,660,000

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

^{2/} Does not include mandatory funds from the PCORTF.

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Major Changes in the Fiscal Year 2021 President's Budget Request

The FY 2021 Budget proposes to consolidate the Agency for Healthcare Research and Quality's (AHRQ) highest priority activities in NIH in order to maximize efficiency of research. This narrative compares NIRSQ funding levels to levels previously funded within AHRQ. However, in addition to these quantifiable comparisons, additional efficiencies are anticipated as NIRSQ works to coordinate health services and patient safety research across NIH and leverage other NIH activities and resources.

Major changes by budget portfolio are briefly described below. NIRSQ's FY 2021 President's Budget discretionary request totals \$256.7 million in budget authority, a decrease of \$81.3 million from AHRQ's FY 2020 Enacted level. NIRSQ's total program level at the FY 2021 President's Budget is \$355.1 million, a decrease of \$89.4 million from AHRQ's total program level in FY 2020. The total program level includes \$98.5 million in mandatory funds from the Patient-Centered Outcomes Research Trust Fund (PCORTF) in FY 2021, a decrease of \$8.0 million from FY 2020. The PCORTF was reauthorized in FY 2020.

Patient Safety (-\$12.3 million; total \$59.9 million): This research portfolio prevents, mitigates, and decreases patient safety risks and hazards, and quality gaps associated with health care and their harmful impact on patients. NIRSQ will provide \$59.9 million for this research portfolio, a decrease of \$12.3 million from the prior year. Of this total, \$30.0 million will support research grants and contracts to advance the generation of new knowledge and promote the application of proven methods for preventing Healthcare-Associated Infections (HAIs). Within this amount, \$10 million will be invested in support of the national Combating Antibiotic-Resistant Bacteria enterprise.

Health Services Research, Data and Dissemination (HSR) (-\$39.6 million; total \$56.6 million): HSR funds foundational health services research through research grant support to the extramural community. NIRSQ will provide \$41.3 million for non-competing research grants, including \$1.0 million to support one of AHRQ's flagship programs -- the Consumer Assessment of Healthcare Providers and Systems (CAHPS). CAHPS supports and promotes the assessment of consumers' experiences with health care. A total of \$5.8 million is provided for new grants, including \$3.8 million in new investigator-initiated research grants. Within this amount, NIRSQ provides \$3.0 million in investigator-initiated applications targeting research Multiple Chronic Conditions (MCC). Nearly one in three American adults and four of five Medicare beneficiaries have MCC. Patients with MCCs account for 64 percent of all clinician visits, 70 percent of all inpatient hospital stays, 83 percent of all prescriptions, and 71 percent of all healthcare spending. Care for patients with MCC is often of suboptimal quality, fragmented and poorly coordinated. NIRSQ grants will focus on providing quality care for this growing population. A total of \$4.5 million in grant funding, \$2.5 million in continuing grants and \$2.0 million in new grants, is provided in FY 2021 to accelerate evidence on preventing and treating opioid abuse in primary care, especially in older adults. This is an increase of \$1.5 million over the FY 2020 Enacted level for this Secretarial priority.

Improving Maternal Morbidity and Mortality through Powering State and Local Innovation through Data and Analytics (+\$7.4 million; total \$7.4 million): HHS is preparing to address the complex challenge of ensuring safe and healthy pregnancies and childbirth. Today 700 or more American women die each year as a result of pregnancy and childbirth and over 50,000 experience severe complications. These outcomes are not evenly distributed, with underserved women, including African-American, being at substantially higher risk of complication and death. The root causes of this crisis in American health and health care are multifaceted and so must the solutions be. The FY 2021 President's Budget provides an increase of \$7.4 million for the first year of a 5-year initiative. The goal of the proposed initiative is to ensure that Federal, State, and local policymakers have timely and accurate data and useful analytic resources about maternal morbidity and mortality and the healthcare system with which to make informed policy decisions. All increases are in addition to existing funds activities, Health Services Research, Data, and Dissemination (*\$5.75 million*), and Medical Expenditure Panel Survey (*\$1.6 million*).

Health Information Technology (-\$16.5 million; total \$0.0 million): The FY 2021 President's Budget ends dedicated funding for health information technology. Instead, health IT research will compete for related funding opportunities within patient safety and health services research to ensure the highest priority research is funded.

U.S. Preventive Services Task Force (-\$4.2 million; total \$7.4 million): The U.S. Preventive Services Task Force (USPSTF) is an independent, volunteer panel of nationally-recognized experts in prevention and evidence-based medicine whose mission is to improve the health of all Americans through evidence-based recommendations regarding the effectiveness of clinical preventive services and health promotion to the general population. This program provides ongoing scientific, administrative, and dissemination support to assist the USPSTF in meeting its mission. A reduction of \$4.2 million in FY 2021 will reduce the number of recommendations the USPSTF will make from an average of 12 recommendations per year to 6 recommendations in FY 2021.

Medical Expenditure Panel Survey (+\$1.8 million; total \$71.8 million): The Medical Expenditure Panel Survey (MEPS), is the only national source for comprehensive annual data on how Americans use and pay for medical care. The survey collects detailed information from families on access, use, expenses, insurance coverage and quality. The funding requested primarily supports data collection and analytical file production for the MEPS family of interrelated surveys, which include a Household Component (HC), a Medical Provider Component (MPC), and an Insurance Component (IC). A total of \$70.0 million is required to provide ongoing support to the MEPS, allowing the survey to meet the precision levels of survey estimates, maximize survey response rates, and maintain the timeliness, quality and utility of data products specified for the survey in prior years. In addition, an increase of \$1.8 million is provided to augment both the sample by 1,000 completed households (2,300 persons) and to redistribute the sample across states. This will allow MEPS to improve its national estimates and increase its capacity for making estimates of individual states and groups of states.

Research Management & Support (-\$17.7 million; total \$53.6 million): RMS activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards, and research and development contracts. As the organization

transitions to the NIH as an Institute, some programmatic activities will end. This reduction in scope will require a decrease of 35 FTEs in FY 2021 from the FY 2020 Enacted level, anticipated to be achieved through attrition, retirements, and a reduction in force if necessary.

Patient-Centered Outcomes Research Trust Fund (-\$8.0 million; total \$98.5 million): AHRQ's total program level at the FY 2021 President's Budget includes \$98.5 million in mandatory funds from the PCORTF, a decrease of \$8 million from the FY 2020 level. This mandatory funding stream was reauthorized in FY 2020. NIRSQ will use these resources to disseminate and implement PCOR research findings; obtain stakeholder feedback on the value of the information to be disseminated and subsequent dissemination efforts; assist users of Health IT to incorporate PCOR research findings into clinical practice; and provide training and career development for researchers and institutions in methods to conduct comparative effectiveness research.

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Summary of Changes

(Dollars in thousands)

AHRQ 2020 Enacted ^{1/}	\$ 338,000
Total estimated budget authority.....	
(Obligations).....	
 NIRSQ 2021 President's Budget ^{1/}	 \$ 256,660
Total estimated budget authority.....	
(Obligations).....	
 Net Change	 \$ (81,340)

	FY 2020 Enacted FTE	FY 2020 Enacted	FY 2021 PB FTE	FY 2021 PB BA	FY 2021 +/- FY 2020 FTE	FY 2021 +/- FY 2020 BA
Increases:						
A. Built-in:						
1.						
2.						
Subtotal, Built-in Increases.....						
 A. Program:						
1. Medical Expenditure Panel Survey		\$69,991		\$71,791		\$1,800
2. Improving Maternal Morbidity & Mortality		\$--		\$7,350		\$7,350
Subtotal, Program Increases.....		\$69,991		\$79,141		\$9,150
Total Increases.....		\$69,991		\$79,141		\$9,150
 Decreases:						
A. Built-in:						
1.						
2.						
Subtotal, Built-in Decreases.....						
 A. Program						
1. Patient Safety		\$72,276		\$59,927		\$ (12,349)
2. Health Services Research, Data and Dissemination		\$96,284		\$56,641		\$ (39,643)
3. Health Information Technology		\$16,500		\$ -		\$ (16,500)
4. U.S. Preventive Services Task Force		\$11,649		\$7,400		\$ (4,249)
5. Research Management and Support (Program Support)	273	\$71,300	238	\$53,551	-35	\$ (17,749)
Subtotal, Program Decreases.....	273	\$268,009	238	\$177,519	-35	\$(90,490)
Total Decrease	273	\$268,009	238	\$177,519	-35	\$(90,490)
 Net Change					-35	\$(81,340)

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

NATIONAL INSTITUTES OF HEALTH
 NATIONAL INSTITUTE FOR RESEARCH ON SAFETY AND QUALITY

Budget Authority by Activity
 (Dollars in Thousands)

	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget
Research on Health Costs, Quality and Outcomes	\$196,046	\$196,709	\$131,318
Medical Expenditure Panel Survey	69,991	69,991	71,791
Research Management and Support	71,300	71,300	53,551
Total, Budget Authority AHRQ ^{1/}	\$336,861	\$338,000	
Total, Budget Authority NIRSQ ^{1/}			\$256,660
FTE	257	273	238

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

NATIONAL INSTITUTES OF HEALTH
 NATIONAL INSTITUTE FOR RESEARCH ON SAFETY AND QUALITY

Authorizing Legislation ^{1/}
 (Dollars in Thousands)

	FY 2020 Amount Authorized	FY 2020 Amount Appropriated	FY 2021 Amount	FY 2021 President's Budget
<u>Research on Health Costs, Quality, and Outcomes:</u> Secs. 301 & 926(a) PHSA.....	SSAN	\$ 196,709	SSAN	\$ 131,318
<u>Research on Health Costs, Quality, and Outcomes:</u> Part A of Title XI of the Social Security Act (SSA) Section 1142(i) ^{4/ 5/} Budget Authority..... Medicare Trust Funds ^{5/ 6/} Subtotal BA & MTF.....	_____	_____	_____	_____
	Expired ^{7/}		Expired ^{7/}	
<u>Medical Expenditure Panel Surveys:</u> Sec. 947(c) PHSA.....	SSAN	\$ 69,991	SSAN	\$ 71,791
<u>Program Support:</u> Sec. 947(c) PHSA.....	Indefinite	\$71,300	Indefinite	\$53,551
<u>Evaluation Funds:</u> Sec. 947(c) PHSA.....		\$0		\$0
Total appropriations, AHRQ ^{3/} Total appropriations, NIRSQ ^{2/, 3/}		\$ 338,000		\$256,660
Total appropriation against definite authorizations.....				

SSAN = Such Sums As Necessary

^{1/} Section 487(d) (3) PHSA makes one percent of the funds appropriated to NIH for National Research Service Awards available to AHRQ. Because these reimbursable funds are not included in AHRQ's appropriation language, they have been excluded from this table.

^{2/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

^{3/} Excludes mandatory financing from the PCORTF.

^{4/} Pursuant to Section 1142 of the Social Security Act, FY 1997 funds for the medical treatment effectiveness activity are to be appropriated against the total authorization level in the following manner: 70% of the funds are to be appropriated from Medicare Trust Funds (MTF); 30% of the funds are to be appropriated from general budget authority.

^{5/} No specific amounts are authorized for years following FY 1994.

^{6/} Funds appropriated against Title XI of the Social Security Act authorization are from the Federal Hospital Insurance Trust Funds (60%) and the Federal Supplementary Medical Insurance Trust Funds (40%).

^{7/} Expired September 30, 2005.

Agency for Healthcare Research and Quality (2012-20) ^{1/2/}
National Institute for Research on Safety and Quality (2021) ^{1/2/}
Appropriations History Table

	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
AHRQ 2012				
Budget Authority.....	\$ -	\$ -	\$ -	\$ -
PHS Evaluation Funds.....	<u>\$366,397,000</u>	\$ -	<u>\$372,053,000</u>	<u>\$369,053,000</u>
Total.....	\$366,397,000	\$ -	\$372,053,000	\$369,053,000
AHRQ 2013				
Budget Authority.....	\$ -	\$ -	\$ -	\$ -
PHS Evaluation Funds.....	<u>\$334,357,000</u>	<u>\$-</u>	<u>\$364,053,000</u>	<u>\$365,362,000</u>
Total.....	\$334,357,000	\$-	\$364,053,000	\$365,362,000
AHRQ 2014				
Budget Authority.....	\$ -	\$ -	\$ -	\$ -
PHS Evaluation Funds.....	<u>\$333,697,000</u>	<u>\$-</u>	<u>\$364,008,000</u>	<u>\$364,008,000</u>
Total.....	\$333,697,000	\$ -	\$364,008,000	\$364,008,000
AHRQ 2015				
Budget Authority.....	\$ -	\$ -	\$ 373,295,000	\$363,698,000
PHS Evaluation Funds.....	<u>\$334,099,000</u>	<u>\$-</u>	<u>\$-</u>	<u>\$-</u>
Total.....	\$334,099,000	\$ -	\$373,295,000	\$363,698,000
AHRQ 2016				
Budget Authority.....	\$275,810,000	\$ -	\$236,001,000	\$334,000,000
PHS Evaluation Funds.....	<u>\$ 87,888,000</u>	<u>\$-</u>	<u>\$-</u>	<u>\$-</u>
Total.....	\$363,698,000	\$ -	\$236,001,000	\$334,000,000
AHRQ 2017				
Budget Authority.....	\$280,240,00	\$280,240,000	\$324,000,000	\$324,000,000
PHS Evaluation Funds.....	<u>\$83,458,000</u>	<u>\$-</u>	<u>\$-</u>	<u>\$-</u>
Total.....	\$363,698,000	\$ 280,240,000	\$224,000,000	\$324,000,000
AHRQ 2018				
Budget Authority.....	\$272,000,000	\$300,000,000	\$324,000,000	\$334,000,000
PHS Evaluation Funds.....	<u>\$-</u>	<u>\$-</u>	<u>\$-</u>	<u>\$-</u>
Total.....	\$272,000,000	\$300,000,000	\$324,000,000	\$334,000,000
AHRQ 2019				
Budget Authority.....	\$255,960,000	\$334,000,000	\$334,000,000	\$338,000,000
PHS Evaluation Funds.....	<u>\$-</u>	<u>\$-</u>	<u>\$-</u>	<u>\$-</u>
Total.....	\$255,960,000	\$334,000,000	\$334,000,000	\$338,000,000
AHRQ 2020				
Budget Authority.....	\$255,960,000	\$339,809,000	\$ -	\$338,000,000
PHS Evaluation Funds.....	<u>\$-</u>	<u>\$ 18,408,000</u>	<u>\$-</u>	<u>\$-</u>
Total.....	\$255,960,000	\$358,217,000	\$ -	\$338,000,000
NIRSQ 2021				
Budget Authority.....	\$256,660,000			
PHS Evaluation Funds.....	<u>\$-</u>			
Total.....	\$256,660,000			

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President’s Budget consolidates AHRQ’s activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

^{2/} Excludes mandatory financing from the PCORTF.

Justification of Budget Request
National Institute for Research on Safety and Quality

Authorizing Legislation: Title III and Title IX and Section 947(c) of the Public Health Service Act, as amended and Section 1013 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003.

Budget Authority (BA)^{1/}:

	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2020 +/- FY 2019
AHRQ Total ^{2/}	\$336,861,000	\$338,000,000		
NIRSQ Total ^{2/} :			\$256,660,000	-\$81,340,000
AHRQ FTEs ^{2/} :	257	273		
NIRSQ FTEs ^{2/} :			238	-35

^{1/}For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

^{2/}Excludes mandatory financing and FTEs from the PCORTE. Includes reimbursable FTE.

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

Director's Overview

The FY 2021 President's Budget transitions the highest priority activities of the former Agency for Healthcare Research and Quality to an Institute at the National Institutes of Health (NIH) – the National Institute for Research on Safety and Quality (NIRSQ). Further integration in NIH is expected in future years that differentiates AHRQ's focus on systems-based outcomes and approaches to improvement across U.S. healthcare settings and populations and AHRQ's status as the only HHS Agency with the statutory mandate to generate health services research and be the principal agency for primary care research. This proposed consolidation will allow NIRSQ to more efficiently transfer research efforts on the diagnosis, prevention, and cure of human diseases developed by NIH to the frontlines of care. NIRSQ will leverage its core competencies in health systems research, practice improvement, and data and analytics to assist policymakers at the Federal, State, and local levels in making qualitative and quantitative policy decisions using reliable, integrated, accessible information to improve the quality, safety, and value of care. NIRSQ will better ensure that NIH's investments in medical science are translated into knowledge and practical tools that physicians and other healthcare professionals can adopt to benefit patients and drive toward value-based transformation.

Fundamental Principle – Practice Improvement. Medical breakthroughs, increasing the number of people living with multiple chronic conditions, and the shifting landscape of the healthcare delivery system all increase the challenges and complexities around providing safer care. Since 2000, with Congressional support, AHRQ has focused on assisting doctors and nurses in their efforts to keep patients safe when they receive medical care. AHRQ has invested in research to understand how healthcare systems can safely and reliably provide high-quality healthcare and has translated the resulting findings into practical tools and training ready for real-world implementation. AHRQ continues to develop new and innovative partnerships to ensure that more health systems, doctors, nurses, patients, and communities are using them. The potential benefit to American patients is extraordinarily high, as is the potential return on investment. AHRQ has made progress in healthcare safety at the frontlines of care, taking stock of the best science and safe practices and giving providers the tools they need to implement changes to keep patients safe. For example, AHRQ’s Comprehensive Unit-based Safety Program (CUSP) has contributed substantially toward reducing healthcare-associated infections when combined with bundles of evidence-based practices with improvement in safety culture, teamwork, and communication. Data released in early 2019 show that reductions in hospital-acquired conditions, including HAIs, helped prevent 20,500 hospital deaths and save \$7.7 billion in healthcare costs from 2014 to 2017. This follows national reductions with this same magnitude dating back to 2010. Time, attention, and resources dedicated to addressing patient safety are producing results. Building on this successful foundation, AHRQ’s CUSP programs have reduced the rates of infections in long-term care facilities, improved safety for mechanically ventilated patients in intensive care units, and helped ambulatory surgery centers make care safer for their patients. NIRSQ recognizes that multiple perspectives are needed to develop solutions to complex challenges.

Our Patient Safety Learning Laboratories take a systems engineering approach to allow researchers and healthcare professionals to identify and create practical solutions to patient safety problems. AHRQ’s Patient Safety Learning Laboratories have the potential to improve the safety of healthcare by allowing practitioners to acquire valuable experience in a variety of clinical settings, reducing patient risk and improving safety. Adding to the breadth of knowledge our Learning Laboratories have already gathered, the patient safety program awarded two grants in 2019 to improve the safety of inter-facility transfers for critically ill newborns during medical ground or air transport from one hospital to another in a regional care network and to explore how to close the loop on diagnostic tests, referrals, and symptoms to prevent diagnostic errors because diagnostic tests and referrals often are not completed, results of diagnostic tests and referrals often are not conveyed to patients and their primary care physicians, and primary care physicians frequently are not informed when symptoms evolve that could alter a diagnosis. Additionally, using funding from the Patient-Centered Outcomes Research Trust Fund (PCORTF), AHRQ funded a \$6 million, 3-year project designed to save lives by increasing patient participation in cardiac rehabilitation after cardiovascular events such as heart attacks, heart failure, angioplasty, or heart surgery. It is estimated that increasing cardiac rehabilitation participation from about 20 percent to 70 percent could save nearly 25,000 lives and prevent about 180,000 hospitalizations a year. Research suggests that cardiac rehabilitation reduces cardiovascular deaths by nearly 30 percent and risk of hospital admissions by 31 percent. The initiative will tackle the problem in several ways, including partnering with and training of at least 100 hospitals and health systems to increase rehabilitation referrals, enrollment and retention and applying strategies in the new Million

Hearts®/AACVPR Cardiac Rehabilitation Change Package, a quality improvement action guide developed by the Centers for Disease Control and Prevention and the American Association of Cardiovascular and Pulmonary Rehabilitation.

Fundamental Competency – Health Systems Research: To improve health, the healthcare delivery systems must put patients at the center of care. NIRSQ will continue to promote an approach to health systems research called Person360 that asks researchers to place healthcare delivery in context with both the individual patient’s social context and in relation to social and human services. NIRSQ will continue to fund critical research on how the healthcare delivery systems is organized and operates. This facilitates the analysis of current patterns of care in current practice so that health outcomes can be improved. Healthcare delivery organizations are rich with data, and those data are the fuel that transforms a healthcare delivery organization into a learning health system. In a learning health system, internal clinical data are systematically collected and analyzed, along with external data, to inform improvements in clinical practice.

AHRQ has demonstrated our continued commitment to health system improvement by awarding \$50 million in grants from Patient Centered Outcomes Research Trust Fund funding over 5 years to 11 institutions that will represent a new, driving force to accelerate health system performance and improvements in patient outcomes. In addition, AHRQ and the Patient-Centered Outcomes Research Institute (PCORI) have joined forces to establish Learning Health System Centers of Excellence in Learning Health System Researcher Training that will produce the next generation of learning health system (LHS) researchers to conduct patient-centered outcomes research and implement the results to improve quality of care and patient outcomes. In FY 2019, AHRQ provided \$16 million to help primary care practices address patients’ unhealthy alcohol use, which affects almost a third of adults, is the Nation’s third leading cause of preventable death and has an estimated annual economic burden of over \$250 billion. Six grantees will work with more than 700 primary care practices over 3 years to implement and evaluate strategies to increase the use of evidence-based interventions such as screening for unhealthy alcohol use, brief interventions for adult patients who drink too much, and medication-assisted therapy for patients with an alcohol use disorder. In FY 2020, AHRQ will continue funding for all continuing investigator-initiated health systems research, which creates a distributed portfolio in which researchers investigate a wide range of scientific questions. History strongly suggests that letting scientists drive the research topics is the most productive route to findings that will eventually translate into research that improves the quality of healthcare. AHRQ’s current delivery system research investments include the foundational areas of health systems research (including safety, quality, and access) as well as emerging areas and current topics (such as opioids, drug pricing, and value-based care). NIRSQ recognizes the value of engaging operational leadership, including chief executive officers and other members of the C-suite, in the development, conduct, and use of health systems research. NIRSQ will continue to engage these organizational leaders to join clinical and research teams in efforts to shrink the time between research advances and implementation to create better patient outcomes. NIRSQ will continue to engage healthcare operation leaders in research to improve safety and quality, and embed those results in how care is provided—all while continuing to engage patients as partners in this critical process.

Fundamental Capability – Data: The healthcare system is undergoing transformation with a drive toward value-based care. Achieving high value for patients remains the overall goal of healthcare delivery, with value defined as treating patients as consumers, treating providers as accountable patient navigators, paying for outcomes and preventing disease before it occurs. The velocity, variety, and volume of data flowing into and through the healthcare system is redefining how care will be delivered, what care patients will receive, where the care is delivered, and how it is delivered. Transitions of care are the movement of patients between providers or clinical settings and typically occur when primary care providers refer patients to specialty care or when patients are discharged from the hospital to subsequent care settings. Our challenge is developing data platforms to use this information to improve patient safety, healthcare quality, and value. NIRSQ is in the preeminent position to analyze this data with our two powerful data platforms—the Medical Expenditure Panel Survey (MEPS) and the Healthcare Cost and Utilization Project (HCUP) MEPS is the only national source of data measuring how Americans use and pay for medical care, examining health insurance, and out-of-pocket spending. HCUP is the Nation’s most comprehensive source of hospital data and also includes information on inpatient care, hospital-based outpatient surgery, and emergency department visits.

MEPS data have been able to show insurance trends over time. Its 2018 Chartbook showed that in 2018, average annual health insurance premiums per enrolled employee with private-sector employer coverage were \$6,715 for single coverage (5.4 percent increase over 2017 levels), \$13,425 for employee-plus-one coverage (5.0 percent increase), and \$19,565 for family coverage (4.7 percent increase). Between 2005 and 2018, premiums for the three types of coverage grew by between 68.3 percent and 82.4 percent, with average annual growth rates between 4.1 percent and 4.7 percent. In 2018, average single premiums were lower in medium firms (\$6,287) than in small (\$6,667) or large firms (\$6,770). Premiums for dependent coverage were highest in large firms in 2018. Specifically, premiums were higher in large firms than in medium and small firms for employee-plus-one coverage (\$13,537 vs. \$12,593 and \$13,044, respectively) and family coverage (\$19,824 vs. \$18,386 and \$18,296, respectively). From 2005 to 2018, the percentage of premiums contributed by employees increased by 3.2 percentage points, 4.2 percentage points, and 3.7 percentage points for single, employee-plus-one, and family coverage, respectively. These increases occurred because employee contributions increased more rapidly than employer contributions over the entire period for each type of coverage.

MEPS data are used by the Bureau of Economic Analysis in computing the U. S. Gross Domestic Product (GDP), by the Office of the Actuary at the Centers for Medicare and Medicaid Services (CMS) in calculating the National Health Expenditure Accounts, and by many states to assess time trends in the provision of employer health benefits in their state. In addition, MEPS data are used extensively to inform Congress on the impacts of changes in policy. For example, MEPS data are used by the Congressional Budget Office to model the effects of policy proposals on healthcare spending, and by the Medicaid and CHIP Access and Payment Commission in determining recommendations to Congress on periodic reauthorizations of the Children’s Health Insurance Program (CHIP).

AHRQ's data have also helped describe the impact of the opioid crisis. HCUP data released in 2019 show that the annual number of Neonatal Abstinence Syndrome births in the United States rose from 8,512 in 2008 to 25,213 in 2016. HCUP data also show that in 2016, the rate of opioid-related hospital stays among women in 2016 was 374.8 per 100,000 population. The rate increased with women's age, decreased with community-level income, and was highest for White women, followed by Black women. Most opioid-related stays among women aged 15-44 years involved abuse/dependence (86 percent). Nearly half of opioid stays among women aged 65 years and older were due to adverse events. Nearly 1 in 10 opioid stays among women aged 45-64 years involved self-harm (more than other age groups). Regardless of income level, White women had the highest rate of opioid-related stays, followed by Black women, but the difference between White and Black women decreased from 34 percent higher for White women in the lowest income quartile to 17 percent higher in the highest income quartile. The rate of opioid-related stays was higher among older women in the western and north central United States but higher among younger women in the northeastern United States. MEPS research finding released in 2019 showed that, on average, during the 3 years from 2013 to 2015, individuals treated for conditions associated with chronic pain comprised only about 14 percent of all adults but comprised more than one-third (36.2 percent) of adult opioid users and used about half (52.8 percent) of opioid prescription fills for adults. Among adults treated for conditions associated with chronic pain, the percentage with any opioid use was slightly higher among the elderly and those aged 45-64 than those aged 18-44. Conversely, among adults only treated for non-chronic conditions, the percentage with any opioid use was higher among the non-elderly than the elderly. These data have been used to brief the Assistant Secretary of Health on the use of opioids and rates of hospitalizations for opioid misuse among the elderly, as well as the extent to which hospital-based births involve complications related to the use of opioids and stimulants. AHRQ researchers also conducted analyses using MEPS for the HHS Secretary's initiative on drug pricing that examined trends in drug prices by payer and drug patent status to help inform Departmental efforts to address the issue of rising prices.

Enhancing both the MEPS and HCUP platforms by greatly expanding the public data they use gives Americans greater return on their investment in NIRSQ by adding to the types of data the Institute make available; increasing the number of users; and by diversifying the ways in which these data, tools, and research can be applied to make the best healthcare decisions possible. All of these data efforts further NIRSQ's critical mission to improve safety, quality, and access to care.

Vision for the Future: NIRSQ remains fully aligned with the DHHS value-based transformation efforts. Recognizing the dynamic shifts that are occurring across the healthcare delivery landscape and leveraging NIRSQ's work, NIH is prepared to lead the Department in meeting the enormous need for transformational strategies within healthcare organizations to move from "volume" to "value" in which the focus is on improving outcomes, reducing cost and expanding choice for consumers. Moving forward, NIRSQ will focus its competencies of practice improvement, health systems research, and data and analytics to address the most pressing issues in healthcare using the latest technology available, including creating seamless care transitions using interoperable digital health, creating a community-level data source for social determinants of health, harnessing the power of predictive analytics to improve diagnosis, transforming care for people living with multiple chronic conditions, and

powering innovation in healthcare through data to drive value-based transformation. NIRSQ will also share these strategies across NIH and build upon existing work at NIH to increase the impact for the healthcare system.

Research on Health Costs, Quality, and Outcomes (HCQO)				
	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$196,046,000	\$196,709,000	\$131,318,000	\$(65,391,000)

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act and Section 1013 of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003.

FY 2021 Authorization.....Expired.
Allocation Method.....Competitive Grant/Cooperative Agreement, Contracts, and Other.

Summary

NIRSQ's program level for Research on Health Costs, Quality, and Outcomes (HCQO) at the FY 2021 President's Budget Level is \$131.3 million, a decrease of \$65.4 million from the FY 2020 Enacted level. A detailed table by research portfolio is provided below. Detailed narratives by research portfolio begin on the following page.

AHRQ/NIRSQ Budget Detail

(Dollars in Millions)

Division	AHRQ FY 2019 Final ^{1/}	AHRQ FY 2020 Enacted ^{1/}	NIRSQ FY 2021 President's Budget ^{1/}
Research on Health Costs, Quality, and Outcomes (HCQO):			
Patient Safety	\$72.032	\$72.276	\$59.927
Health Services Research, Data and Dissemination	95.960	96.284	56.641
Improving Maternal Morbidity and Mortality	0.000	0.000	7.350
Health Information Technology	16.444	16.500	0.000
U.S. Preventive Services Task Force	11.610	11.649	7.400
Subtotal, HCQO	196.046	196.709	131.318

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information about the Agency for Healthcare Research and Quality (AHRQ) and are provide for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ into the National Institutes of Health (NIH), and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

HCQO: Patient Safety				
	FY 2019 Final	FY 2020 Annualized CR Level	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$72032,000	\$72,276,000	\$59,927,000	\$(12,349,000)

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act FY 2021 Authorization.....Expired.
Allocation Method.....Competitive Grant/Cooperative Agreement, Contracts, and Other.

Patient Safety Research: The objectives of this program are to prevent, mitigate, and decrease patient safety risks and hazards, and quality gaps associated with health care and their harmful impact on patients. This mission is accomplished by funding health services research in the following activities: Patient Safety Risks and Harms, Healthcare-Associated Infections (HAIs), and Patient Safety Organizations (PSOs). A table showing the allocation by these activities is provided below. Projects within the program seek to inform multiple stakeholders including health care organizations, providers, policymakers, researchers, patients and others; disseminate information and implement initiatives to enhance patient safety and quality; improve teamwork and communication to improve organizational culture in support of patient safety; and maintain vigilance through adverse event reporting and surveillance in order to identify trends and prevent future patient harm.

Patient Safety Research Activities
(in millions of dollars)

	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget
Patient Safety Risks and Harms	\$31.304	\$31.410	\$26.116
Patient Safety Organizations (PSOs)	4.850	4.866	3.845
Healthcare-Associated Infections (HAIs)	35.878	36.000	29.966
Patient Safety Research Activities	\$72.032	\$72.276	\$59.927

FY 2019 Accomplishments by Research Activity:

Patient Safety Risks and Harms: The issue of diagnostic safety has not received the same level of attention as other patient safety harms. [In a study](#) of patients seeking second opinions from the Mayo Clinic, researchers found that only 12 percent were correctly diagnosed by their primary care providers. More than 20 percent had been [misdiagnosed](#), while 66 percent required some changes to their initial diagnoses. AHRQ funded \$5.0 million in new patient safety learning laboratories (PSLLs) along with \$5.0 million in continuing PSLL grants for a total investment of \$10.0 million. These new PSLLs apply systems engineering approaches to address both diagnostic and treatment errors in health care. AHRQ also funded \$2.0 million in new grants that seek to further our understanding of the incidence of diagnostic errors in the population, the

risks and protective factors associated with such errors, and the relationship between diagnostic errors and utilization and expenditures. In addition, in FY 2019 AHRQ developed three different resources to address failures in the diagnostic process. AHRQ also provided continuation support for grants to combat the opioid epidemic. The early successful results of one grant project is being spread to 15 additional sites in a contract that was awarded at the end of FY 2018. According to the Joint Commission, an estimated 80 percent of serious medical errors involve miscommunication between caregivers when responsibility for patients is transferred or handed-off. Therefore in FY 2019, AHRQ built on past successes and focused on the continued expansion of projects that demonstrate impact in improving patient safety, including ongoing support for the use of successful initiatives that seamlessly integrate the use of evidence-based resources in multiple settings such as TeamSTEPPS® (Team Strategies and Tools to Enhance Performance and Patient Safety) and the Surveys on Patient Safety Culture. These projects address the challenges of healthcare teamwork, communication and coordination among provider teams. Better teamwork and the establishment of safety cultures in healthcare organizations are critically important to patient safety. Both of these topics are widely recognized as foundational bases on which patient safety can be improved. One of the diagnostic safety resources AHRQ will begin developing in FY 2019 is a new TeamSTEPPS module focusing on improving diagnostic safety. This project has just begun and the module is expected to be completed in January of 2021. [Research](#) has shown that preventable adverse events constitute nearly 60% of harms experienced by residents in nursing homes. In ambulatory care, a [systematic review](#) found there are between 2–3 patient safety incidents per 100 consultations/patient records reviewed and about 4% of these incidents were associated with severe harm. To address these patient safety issues, in FY 2019 AHRQ continued to support grants to a) improve patient safety in ambulatory and long term care settings and b) improve medication safety.

Healthcare-Associated Infections (HAIs): In FY 2019, AHRQ made significant progress in the three CUSP projects that are currently under way. 1) CUSP for antibiotic stewardship (official title: AHRQ Safety Program for Improving Antibiotic Use) completed an acute care cohort in December 2018, which comprised over 400 hospitals, including 6 Department of Defense and 79 critical access hospitals. A long-term care cohort involving over 400 long-term care facilities was launched in December 2018 and was completed in December 2019. Recruitment was also begun for an ambulatory care cohort that will include 250-500 ambulatory care settings that launched in December 2019, data collection is ongoing. 2) In January 2019, CUSP for intensive care units (ICUs) with persistently elevated rates of CLABSI and CAUTI (official title: AHRQ Safety Program for Intensive Care Units: Preventing CLABSI and CAUTI) launched its fifth one-year cohort comprising 144 ICUs to participate in the project. Over 650 ICUs have actively participated in the project overall. 3) As of June 2019, CUSP for improving surgical care and recovery (official title: AHRQ Safety Program for Improving Surgical Care and Recovery) has recruited 295 hospitals in 42 States to participate in the project. The hospitals range from those with fewer than 100 beds to those with more than 500 beds. The first cohort addressed colorectal surgery, the second cohort added a focus on orthopedic surgery, and the third cohort added a focus on gynecological surgery. Planning was also initiated for a fourth cohort that will address emergency general surgery.

Patient Safety Organizations (PSOs): The U.S. Department of Health & Human Services was directed in the Patient Safety and Quality Improvement Act of 2005 (Patient Safety Act) to create and maintain a Network of Patient Safety Databases (NPSD) to provide an interactive, evidence-

based, management resource for health care providers, Patient Safety Organizations (PSOs) listed by AHRQ, and others. In June 2019 AHRQ released the first NPSD to the public. The NPSD is the first publicly-available online resource that captures non-identifiable information on patient safety events collected by AHRQ-listed PSOs and their participating providers across the U.S. PSOs collect data using AHRQ's Common Formats for Event Reporting - Hospitals, a standardized reporting format using common language and definitions of patient safety events. As more providers begin to work with AHRQ-listed PSOs, the number of providers and PSOs contributing data to the NPSD will grow, and the subject areas available for reporting will expand. To make the data available for meaningful, national learning purposes, NPSD includes informational tools, such as dashboards and chartbooks. Data from the NPSD also will be used to prepare a Report to Congress on effective strategies for reducing medical errors and increasing patient safety.

FY 2021 President's Budget Policy: The FY 2021 Request for Patient Safety research is \$59.9 million, a decrease of \$12.3 million from the FY 2020 Enacted level.

Research Related to Risk and Harms

At the FY 2021 President's Budget level, Research related to Risk and Harms will total \$26.1 million, a decrease of \$5.3 million from the FY 2020 Enacted level. The FY 2021 budget will fund \$18.4 million in continuing grants and \$7.7 million in research contracts. No funding is available for new grants in FY 2021. At the President's Budget level, NIRSQ will continue \$10.0 million in funding for PSLs to use systems engineering approaches to reduce patient harm due to treatment and diagnostic errors. Through two other grant initiatives, NIRSQ will provide \$3.0 million in continuation funding for grants to improve patient safety in ambulatory and long term care settings and to improve medication safety. In addition, NIRSQ will provide continuation funding for grants that seek to address challenges associated with opioids. AHRQ will also continue to fund grants to understand the incidence of diagnostic errors, contributing factors for these errors and the association between errors and outcomes. The FY 2021 President's Budget level provides no new grant funding to expand this research. The Medicare Patient Safety Monitoring System (MPSMS) is being used to help understand the extent of medical errors taking place in U.S. hospitals. Using research contract funding, NIRSQ is developing and testing an improved patient safety surveillance system to replace MPSMS that is known as the Quality and Safety Review System (QSRS). QRS will generate adverse event rates, trend performance over time, and unlike MPSMS, QRS was designed to also serve as a local hospital and health system tool to identify and measure adverse events to inform safety improvement projects. In FY 2021, NIRSQ anticipates making QRS available to hospitals.

Healthcare-Associated Infections

Within the overall patient safety budget, the FY 2021 President's Budget level provides \$30.0 million, a decrease of \$6.0 million from the FY 2020 Enacted level, to support research grants and contracts to advance the generation of new knowledge and promote the application of proven methods for preventing Healthcare-Associated Infections (HAIs). Within this amount, \$10.0 million will be invested in support of the national Combating Antibiotic-Resistant Bacteria (CARB) enterprise. Program activities will include efforts in antibiotic stewardship, with a focus on ambulatory and long-term care settings, as well as hospitals. In total, at the FY 2021 President's Budget level, HAIs will provide \$17.5 million in noncompeting grants, \$2.7 million for new research grants, and \$9.8 million in research contract support. New grant support at the

FY 2021 President's Budget level is \$3.6 million below the FY 2020 Enacted level, reducing new grants. At the FY 2021 President's Budget level, NIRSQ's Safety Program for Improving Antibiotic Use, which is applying CUSP to promote implementation of antibiotic stewardship, will complete the expansion of its reach beyond earlier cohorts of hospitals and long-term care facilities to encompass antibiotic stewardship in ambulatory settings, using FY 2019 funds. NIRSQ will also complete the expansion of the CUSP projects aimed at reducing central line-associated blood stream infections (CLABSI) and catheter-associated urinary tract infections (CAUTI) in intensive care units (ICUs) with elevated level of these infections, and enhancing care and recovery of surgical patients, using FY 2019 funds. At the FY 2021 President's Budget level for HAIs, NIRSQ will focus its FY 2021 CUSP investment on continuing the CUSP project for preventing methicillin-resistant Staphylococcus aureus (MRSA) infections, which is slated to be initiated in FY 2020 (see Program Portrait on the following page). The evidence and products of the CUSP projects are shared with other HHS OPDIVs. CDC and CMS staff serve on the Technical Expert Panels of projects and are involved in the development and dissemination of toolkits that are produced by the projects.

Patient Safety Organization

The FY 2021 President's Budget level provides \$3.8 million to continue conformance with requirements of the Patient Safety Act. This is a decrease of \$1.0 million from the FY 2020 Enacted level. The Patient Safety Act provides privilege and confidentiality protections to certain information, including that prepared by health care providers throughout the country working with PSOs for quality and safety improvement activities. The Patient Safety Act promotes increased voluntary patient safety event reporting and analysis, as patient safety work product reported to a PSO generally cannot be used as part of litigation (e.g., medical malpractice claims) and other proceedings at the Federal, state, local, or administrative level. HHS issued regulations to implement the Patient Safety Act, which authorized the certification of PSOs, and NIRSQ will now administer the provisions of the Patient Safety Act dealing with PSO requirements for certification.

Program Portrait: Comprehensive Unit-based Safety Program (CUSP)

1. CUSP for Methicillin-Resistant Staphylococcus Aureus (MRSA)

FY 2020 Enacted Level:	\$8.5 million
<u>FY 2021 President's Budget Level:</u>	<u>\$8.0 million</u>
Change:	-\$0.5 million

The Comprehensive Unit-based Safety Program (CUSP), which was both developed and shown to be effective with AHRQ funding, involves improvement in safety culture, teamwork, and communication, together with a checklist of evidence-based safety practices. CUSP was highly effective in reducing central line-associated blood stream infections in more than 1,000 ICUs that participated in AHRQ's nationwide CUSP implementation project for central line-associated blood stream infections. Subsequently, AHRQ expanded the application of CUSP to prevent other HAIs, including catheter-associated urinary tract infections in hospitals and long-term care facilities, surgical site infections and other surgical complications in inpatient and ambulatory surgery, and ventilator-associated events.

NIRSQ will provide \$8.0 million for CUSP activities at the FY 2021 President's Budget level, a decrease of \$0.5 million from the prior year. This decrease is related the stage of project implementation. The FY 2021 funding will support subsequent years of a CUSP project, which require somewhat lower funding than the first year funded with FY 2020 funds, in which project initiation and start-up costs are incurred. The FY 2021 CUSP funding level provides continuation funding for one CUSP project, CUSP for methicillin-resistant Staphylococcus aureus (MRSA), slated to be started in FY 2020.

In FY 2021, NIRSQ's three current CUSP projects will complete their expansion efforts. NIRSQ's Safety Program for Improving Antibiotic Use, which is applying CUSP to promote implementation of antibiotic stewardship, will complete the expansion of its reach beyond earlier cohorts of hospitals and long-term care facilities to encompass antibiotic stewardship in ambulatory settings, using FY 2019 funds. NIRSQ will also complete the expansion of the CUSP project aimed at reducing central line-associated blood stream infections (CLABSI) and catheter-associated urinary tract infections (CAUTI) in intensive care units (ICUs) with elevated level of these infections, as well as the CUSP project for enhancing care and recovery of surgical patients, using FY 2019 funds.

Mechanism Table:

Patient Safety ^{1/}
(Dollars in Thousands)

	AHRQ FY 2019 Final		AHRQ FY 2020 Enacted		AHRQ FY 2021 President's Budget	
	No.	Dollars	No.	Dollars	No.	Dollars
RESEARCH GRANTS						
Non-Competing.....	62	23,969	80	34,658	76	35,873
New & Competing.....	35	16,160	18	8,406	6	2,721
Supplemental.....	0	0	0	0	0	0
TOTAL, RESEARCH GRANTS.....	97	40,129	98	43,064	82	38,594
TOTAL CONTRACTS/IAAs.....		31,902		29,212		21,333
TOTAL.....		72,032		72,276		59,927

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information about the Agency for Healthcare Research and Quality (AHRQ) and are provide for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ into the National Institutes of Health (NIH), and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

5-Year Funding Table:

FY 2017:	\$70,276,000
FY 2018:	\$70,276,000
FY 2019 Final:	\$72,032,000
FY 2020 Enacted:	\$72,276,000
FY 2021 President's Budget:	\$59,927,000

Key Outputs and Outcomes Tables with Performance Narrative: Patient Safety

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2020 Target	FY 202 Target	FY 2021 Target +/-FY 2020 Target
1.3.38 Increase the number of users of research using AHRQ/NIRSQ-supported research tools to improve patient safety culture (Outcome)	FY 2019: 3781 users of research Target: 3650 users of research (Target Exceeded)	3850 users of research	3950 users of research	+100 users of research
1.3.41 Increase the cumulative number of evidence-based resources and tools available to improve the quality of health care and reduce the risk of patient harm. (Outcome)	FY 2019: 204 tools Target: 200 tools (Target Exceeded)	215 tools	225 tools	+10 tools
1.3.62 Reduce the rate of CAUTI cases in hospital intensive care units (ICUs) (Outcome)	FY 2019: NHSN Rate: Baseline: 1.53 CAUTI/1,000 catheter days Intervention: 1.17 CAUTI/1,000 catheter days Results: 24% reduction ([1.53-1.17]/1.53) Population Rate: Baseline: 8.31 CAUTI/10,000 patient days Intervention: 5.74 CAUTI/10,000 patient days Results: 31% reduction ([8.31-5.74]/8.31) Target: 5% reduction from FY 2019 Baseline NHSN and Population Rates. (Target Exceeded)	5% reduction from FY 2020 Baseline NHSN and Population Rates	5% reduction from FY 2021 Baseline NHSN and Population rates	N/A

1.3.38: Increase the number of users of research implementing AHRQ/NIRSQ-supported research tools to improve patient safety culture

As an indicator of the number of users of research, the Agency relies in part on Surveys on Patient Safety Culture (SOPS). AHRQ developed SOPS to support a culture of patient safety and quality improvement in the Nation's health care system. The safety culture surveys and related resources can be used by hospitals, nursing homes, medical offices, and community pharmacies. Each SOPS survey has an accompanying toolkit that contains: survey forms, survey items and dimensions, survey user's guide, and a data entry and analysis tool. Health care organizations can use SOPS to: raise staff awareness about patient safety, examine trends in culture over time, conduct internal and external benchmarking, and identify strengths and areas for improvement. SOPS can be used to assess the safety culture of individual units and departments or organizations as a whole.

Since the 2004 release of the hospital SOPS, thousands of health care organizations have implemented the surveys and downloaded SOPS and the related resources from the AHRQ Web site. The interest in the resources has remained strong over the past 15 years as evidenced by electronic downloads, orders placed for various products, participation in SOPS Webinars, and requests for technical assistance.

In response to requests from SOPS users and patient safety researchers, AHRQ established comparative databases as central repositories for survey data from health care organizations that have administered the SOPS. Upon meeting minimal eligibility requirements, health care organizations can voluntarily submit their survey data for aggregation and compare their safety culture survey results to others. AHRQ moved, in 2014, to a bi-annual collection of survey data to enhance accuracy of the survey results and reduce the burden on organizations.

For the purposes of reporting, AHRQ defines "SOPS users" as those organizations who submit results to the comparative databases. Thus, this number is only a portion of the total number of users of SOPS; there are many others who access the SOPS surveys and materials - which AHRQ is aware of through technical assistance requests and Web downloads – but do not submit data to the comparative databases.

In FY 2019, the submissions to the comparative databases were provided by 3,781 users of research, including: 282 ambulatory surgery centers; 630 hospitals; 2,437 medical offices; 191 nursing homes; and 255 community pharmacies.

1.3.41: Increase the cumulative number of evidence-based resources and tools available to improve the quality of health care and reduce the risk of patient harm.

A major output of the Patient Safety Portfolio is the availability of evidence-based resources and tools that can be utilized by healthcare organizations to improve the care they deliver, and, specifically, patient safety. An expanding set of evidence-based tools is available as a result of ongoing investments to generate knowledge through research and synthesize and disseminate this new knowledge in the optimal format to facilitate its application.

The Agency has provided resources and tools such as:

- AHRQ Patient Safety Network (AHRQ PSNet) & Web M&M (Morbidity and Mortality Rounds on the Web);
- AHRQ QuestionBuilder App;
- AHRQ's Safety Program for Nursing Homes: On-Time Pressure Ulcer Prevention;
- Common Formats (standardized specifications for reporting patient safety events);
- Environmental Scan of Primary-Care Based Effort to Reduce Readmissions;
- Guide to Improving Patient Safety in Primary Care Settings by Engaging Patients and Families;
- Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation;
- Nursing Home Antimicrobial Stewardship Modules;
- Preventing Hospital-Acquired Venous Thromboembolism: A Guide for Effective Quality Improvement
- Re-Engineered Discharge (RED) Toolkit;
- Reducing Diagnostic Error in Primary Care Pediatrics Toolkit;
- The Six Building Blocks: A Team-Based Approach to Improving Opioid Management in Primary Care;
- The Toolkit to Engage High-Risk Patients In Safe Transitions Across Ambulatory Settings; and
- The Toolkit to Promote Safe Surgery.

The Patient Safety Portfolio is projecting that the number of evidence-based resources and tools will continue to increase with a projected cumulative number of 215 in FY 2020 and 225 in FY 2021.

1.3.62: Reduce the rate of CAUTI cases in hospital intensive care units (ICUs)

A performance measure has been developed in connection with an HAI project as follow-on to earlier CUSP projects. Data from the CUSP for CAUTI project have shown that hospital units other than intensive care units (ICUs) have achieved greater reductions in CAUTI rates than ICUs. It appears that this difference is related to the clinical culture of the ICU, where staff who are treating critically ill patients favor maintaining indwelling urinary catheters to closely monitor urine output for relatively longer times than in non-ICUs. In a similar vein, some hospitals in the CUSP for CLABSI project did not achieve the significant reductions in CLABSI rates that were attained by their peers. The current HAI project is adapting CUSP to bring down persistently elevated CAUTI and CLABSI rates in ICUs. The performance measure focuses on CAUTI rates because the baseline rate for CAUTI is likely to be easier to estimate and more stable than for CLABSI.

In FY 2021, NIRSQ will complete the expansion of the CUSP project for reducing CAUTI and CLABSI rates in ICUs with persistently elevated rates of these infections, using FY 2019 funds. This expansion from four regions of the country to nationwide coverage was initially funded with

FY 2017 funds, and expansion activities began at the beginning of FY 2018. The FY 2021 HAI performance measure assesses progress toward reducing the rate of CAUTI in ICUs participating in the CUSP project.

In this project, cohorts of ICUs are being recruited on a rolling basis. Progress in reducing CAUTI in a Fiscal Year is therefore assessed by deriving two contemporaneous baseline rates of CAUTI for the ICUs participating in that Fiscal Year's cohort and determining whether the CAUTI rates for those ICUs have been reduced after intervention. The first baseline rate is the National Healthcare Safety Network (NHSN) rate. This rate is defined as the number of CAUTI cases per 1,000 catheter days. An important approach for reducing CAUTI cases is to reduce the use of catheters and thus the number of catheter days. However, to the extent that this effort succeeds, it lowers the denominator in the NHSN rate and thereby appears to raise the CAUTI rate. A second rate is therefore also being used: the population rate, defined as the number of CAUTI cases per 10,000 patient days. The denominator of this rate is not affected by a reduction in the number of catheter days.

The most recent project results are from FY 2019. In FY 2019, as shown in the table, the baseline NHSN rate for the ICUs then participating in the project was 1.53 CAUTI/1,000 catheter days. The NHSN rate after intervention was 1.17 CAUTI/1,000 catheter days, which is a 24% reduction in the NHSN CAUTI rate. The baseline population rate was 8.31 CAUTI/10,000 patient days. The population rate after intervention was 5.74 CAUTI/10,000 patient days, which is a 31% reduction in the population CAUTI rate. These results for reductions in the NHSN and population CAUTI rates substantially exceed the target of a 5% reduction.

In a similar fashion, contemporaneous baseline NHSN and population CAUTI rates will be derived from all the ICUs participating in the project in FY 2020 and FY 2021, respectively. Given the virtual absence of reductions in CAUTI rates observed in ICUs in the nationwide CUSP for CAUTI project, the targets for FY 2020 and FY 2021 are being set quite conservatively in light of the fact that the participating ICUs have been chosen because they are among the lower-performing units in terms of reducing their rate of CAUTI (and/or CLABSI).

HCQO: Health Services Research, Data and Dissemination				
	FY 2019 Final	FY 2020 Annualized CR Level	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$ 95,960,000	\$ 96,284,000	\$ 56,641,000	\$ (39,643,000)

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act
 FY 2021 Authorization.....Expired.
 Allocation Method.....Competitive Grant/Cooperative Agreement, Contracts, and Other.

Health Services Research, Data, and Dissemination (HSR): The principle goals of HSR are to identify the most effective ways to organize, manage, finance, and deliver high quality care, reduce medical errors, and improve patient safety. The portfolio first conducts research to identify the most pressing questions faced by clinicians, health system leaders, policy makers and others about how to best provide the care patients need, together with appropriate solutions. These questions include ones about how hospitals can address life threatening infections in their intensive care units to how primary care practices can find and use the best evidence to reduce their patients’ chances of developing heart disease or having a stroke. It also includes questions about critical public health crises, such as the nation’s opioids epidemic. This research is done both through investigator-initiated and directed research grants programs, as well as through research contracts.

The next step in the HSR continuum is to implement the findings of our research. AHRQ supports the implementation of its research findings by creating practical tools and resources that can be used in real-world settings by professionals on the front lines of health care and policy making. For instance, AHRQ has developed a model program for shared decision making between clinicians and their patients, along with creating modules to train physicians and nurses on using the program and training others to use it, as well. In addition, AHRQ ensures that these kinds of resources are widely available by working with partners inside and outside of HHS through public-private partnerships that maximize AHRQ’s expertise by leveraging these organizations own networks and members.

Finally, AHRQ creates and disseminates data and analyses of key trends in the quality, safety, and cost of health care to help users understand and respond to what is driving the delivery of care today. These data and analyses take the form of statistical briefs, interactive presentations of information on a national and state-by-state basis, infographics, and articles and commentaries in leading clinical and policy outlets. AHRQ also develops measures of safety and quality that are used to track changes in quality, safety, and health care costs over time, providing benchmarks and dashboards for judging the effectiveness of clinical interventions and policy changes. AHRQ not only provides National data sets and analyses, but where possible, AHRQ provides insights on the State and local levels, too.

Health Services Research, Data and Dissemination (HSR)

(in millions of dollars)

	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget
Health Services Research Grants	\$58.666	\$57.723	\$47.141
<i>(Investigator-Initiated)</i>	<i>(\$54.519)</i>	<i>(\$52.933)</i>	<i>(\$41.641)</i>
Health Services Contract/IAA Research	\$14.000	\$14.000	\$0.750
Measurement and Data Collection	\$14.110	\$14.377	\$8.750
Dissemination and Implementation	\$9.184	\$10.184	\$0.000
Total, HSR	\$95.960	\$96.284	\$56.641

Health Services Research Grants: Health Services Research grants, both targeted and investigator-initiated, focus on research in the areas of quality, effectiveness and efficiency. These activities are vital for understanding the quality, effectiveness, efficiency, and appropriateness of health care services. Investigator-initiated research is particularly important. New investigator-initiated research and training grants are essential to health services research – they ensure that both new ideas and new investigators are created each year. Investigator-initiated research grants allow extramural researchers to pursue the various research avenues that lead to successful yet unexpected discoveries. In this light, the investigator-initiated grant funding is seen as one of the most vital forces driving health services research in this country. The FY 2020 Enacted provides \$52.9 million for investigator-initiated research.

FY 2021 President's Budget Policy: The FY 2021 President's Budget provides \$47.1 million for research grants, a decrease of \$10.6 million from the FY 2020 Enacted level. NIRSQ provides \$41.3 million in continuation research grant support, including \$1.0 million for the Consumer Assessment of Healthcare Providers and Systems (CAHPS). The FY 2021 President's Budget level for CAHPS is approximately \$1.1 million below support in the prior year. CAHPS supports and promotes the assessment of consumers' experiences with health care. Patients should be at the center of the health care they receive. Asking patients about their experiences in a way that's comfortable for them to respond provides important feedback to health care practitioners about how to make care more patient-focused, which ultimately leads to safer and higher quality care. Support for new research and training grants totals \$5.8 million. Of the new research grant funding, the allocation is as follows:

- \$3.0 million is directed to new investigator-initiated grants focused on multiple chronic conditions (MCC). Nearly one in three American adults and four of five Medicare beneficiaries have Multiple Chronic Conditions (MCC). The numbers of children and adolescents with MCCs is growing. Patients with MCCs account for 64 percent of all clinician visits, 70 percent of all inpatient hospital stays, 83 percent of all prescriptions, and 71 percent of all healthcare spending. As the U.S. population ages, caring for people with MCC will place an increasing strain on health systems and to the Medicare and Medicaid programs.
- \$2.0 million is directed to new research grants to continue AHRQ's work to accelerate evidence on preventing and treating opioid misuse in primary care. AHRQ data have demonstrated that prescription opioids use has increased among adults 65 years of age and

older with a corresponding increase in the rates of opioid-related emergency room visits and hospitalizations. The reasons for the high use of opioids and the adverse effects among the elderly are not widely understood and interventions to address the opioid crisis targeting the needs of younger adults and heroin users may not be applicable to this population. NIRSQ intends to fund grants to develop, implement, evaluate, and disseminate strategies to improve the management of opioid use and opioid use disorder (OUD) in older adults in primary care settings. Proposed applicants must propose a comprehensive plan that uses evidence-based interventions and quality improvement strategies designed to improve the management of pain, opioid use, and OUD for older adults in primary care. In total, the FY 2021 President's Budget provides \$4.5 million in funding to support the Secretary's initiative to combat opioid abuse, misuse, and overdose - \$2.5 million in noncompeting research grants and \$2.0 million in new grant support.

- \$0.8 million is directed to new investigator-initiated research and training grants on any topic. Coupled with \$38.8 million in continuation grant support and \$3.0 million in MCC, NIRSQ will fund a total of \$41.6 million in investigator-initiated research grants, a decrease of \$11.3 million from the prior year. The reduction in funding will eliminate approximately 26 investigator-initiated research grants.

Health Services Contracts/IAA Research: Similar to support of research grants, funding of health services contracts and IAAs support health services research activities that impact quality, effectiveness and efficiency of health care. An example of an HSR contract is support for the Evidence-Based Practice Center (EPC) program. The EPCs review all relevant scientific literature on a wide spectrum of clinical and health services topics to produce various types of evidence reports that are widely used by public and private health care organizations. These reports may be used for informing and developing coverage decisions, quality measures, educational materials and tools, clinical practice guidelines, and research agendas. This research activity also funds HSR implementation research contracts, data security, data analytics, peer review of research grants, and contracts that support public access to research results. FY 2020 funding for Health Services Contracts/IAAs is \$14.0 million.

FY 2021 President's Budget Policy: The FY 2021 Request provides \$0.8 million for this activity, a decrease of \$13.2 million from the FY 2020 Enacted level. This funding is all dedicated to the Evidence-based Practice Center program.

Measurement and Data Collection: Monitoring the health of the American people is an essential step in making sound health policy and setting research and program priorities. Data collection and measurement activities allow us to document the quality and cost of health care, track changes in quality or cost at the national, state, or community level; identify disparities in health status and use of health care by race or ethnicity, socioeconomic status, region, and other population characteristics; describe our experiences with the health care system; monitor trends in health status and health care delivery; identify health problems; support health services research; and provide information for making changes in public policies and programs. AHRQ's Measurement and Data Collection Activity coordinates AHRQ data collection, measurement and analysis activities across the Agency. In FY 2020 AHRQ will provide \$14.3 million to support measurement and data collection activities including the following flagship projects: Healthcare Cost and Utilization Project (HCUP), Consumer Assessment of Healthcare

Providers and Systems (CAHPS), AHRQ Quality Indicators (AHRQ QIs), and the National Healthcare Disparities and Quality Reports (QDRs).

FY 2021 President's Budget Policy: The FY 2021 President's Budget provides \$8.8 million for Measurement and Data Collection activities, a decrease of \$5.6 million from the prior year. This funding level will provide support partial funding for Healthcare Cost and Utilization Project (HCUP). No funding is provided for Consumer Assessment of Healthcare Providers and Systems (CAHPS), AHRQ Quality Indicators (QIs), or the National Healthcare Disparities and Quality Reports (QDRs). For more information about HCUP please see the program portrait on page 33.

Dissemination and Implementation: AHRQ's dissemination and implementation activities foster the use of Agency-funded research, products, and tools to achieve measurable improvements in the health care patients receive. AHRQ research, products, and tools are used by a wide range of audiences, including individual clinicians; hospitals, health systems, and other providers; patients and families; payers, purchasers, and health plans; and Federal, state, and local policymakers. AHRQ's dissemination and implementation activities are based on assessments of these audiences' needs and how best to foster use of Agency products and tools, plus sustained work with key stakeholders to develop ongoing dissemination partnerships. In addition, AHRQ sponsors the dissemination of research findings and tools through tailored, hands-on technical assistance. Support for Dissemination and Implementation activities is \$10.2 million at the FY 2020 Enacted level.

FY 2021 President's Budget Policy: The FY 2021 President's Budget ends support for dissemination and implementation activities as a result of the consolidation with NIH. NIRSQ will end outreach to stakeholders, advocacy and intermediary groups that impact adoption of new findings by end users; vital toolkits used by front-line clinicians; and reduce direct contact with health care industry leaders by attending and exhibiting at their professional meetings. The elimination of dissemination and implementation support will impact the Agency's ability to communicate with physicians, nurses, hospital, and health systems leaders, states, and others. Prior support for dissemination and implementation activities has allowed AHRQ to make more widely available the tools and interventions that have led to reductions in hospital-acquired conditions, preventing 350,000 infections, preventing 8,000 deaths, and saving \$2.9 billion in care costs from 2014 to 2016.

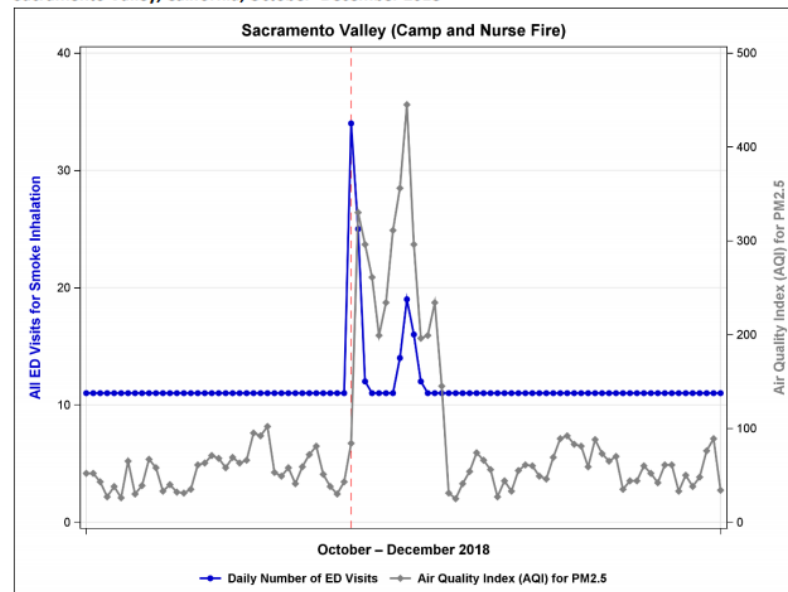
Program Portrait: Healthcare Cost and Utilization Project (HCUP) – Wild Fires in California: ED Visits

The Healthcare Cost and Utilization Project (HCUP) is the Nation’s most comprehensive source of hospital care data, including all-payer information on inpatient stays, ambulatory surgery and services visits, and emergency department (ED) encounters. HCUP enables researchers, insurers, policymakers and others to study health care delivery and patient outcomes over time, and at the national, regional, State, and community levels. This program develops on-line query systems that present descriptive statistics on utilization for specific medical conditions, quality and cost of care.

HCUP data were used to assist Federal and State emergency responders in planning for medical needs following California wildfires in the Fall of 2019. Based on a request by the Assistant Secretary of Preparedness and Response (ASPR), HCUP demonstrated that ED visits due to smoke inhalation were not as prevalent as anticipated (<https://hcup-us.ahrq.gov/reports/ataglance/HCUPAnalysisCA2018Wildfires.pdf>). Thus, responders were not deployed (as originally planned) to distribute respiratory masks to people in the affected communities. Instead, responders were deployed to identify and assist households with electricity-dependent durable medical equipment (DME).

Specifically, HCUP State Emergency Department Databases (SEDD) and State Inpatient Databases (SID) for California were used to examine ED utilization for select conditions (e.g., smoke inhalation and burns) at the time of previous California wildfires between October–December 2018, comparing ED use and air quality in the areas of the wildfire. The figure below depicts the counts of ED visits in Sacramento Valley (the location of the Camp and Nurse fires) that had hazardous air quality indices for several days following the fire on November 8, 2018. The figure shows that that daily counts of the smoke inhalation-related ED visits in Sacramento Valley were highest on the day of the fire, decreased over several days, and then rose slightly on day 7 and 8 at which point counts dropped to near normal levels.

Figure 3a: Air Quality Indicator PM_{2.5} and Emergency Department Visits for Smoke Inhalation, Sacramento Valley, California, October–December 2018



Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID) and State Emergency Department Databases (SEDD), California, 2018

- The **blue line** indicates the daily ED utilization for residents of the counties in the air basin, with y-axis values to the left of the graph. The maximum for the ED utilization y-axis varies across conditions and sometimes across air basins within condition. All values smaller than 11 (including 0) were set to ‘11’ to protect patient confidentiality.
- The **gray line** indicates the daily maximum of the AQI for the PM_{2.5} measurement, with y-axis values to the right of the graph. The maximum for the AQI y-axis is set to 500 on all figures.
- The **red dashed vertical line** indicates November 8th, 2018.

Mechanism Table:
AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

Health Services Research, Data and Dissemination
^{1/} (Dollars in Thousands)

	AHRQ FY 2019 Final		AHRQ FY 2020 Enacted		AHRQ FY 2021 President's Budget	
	No.	Dollars	No.	Dollars	No.	Dollars
RESEARCH GRANTS						
Non-Competing.....	155	40,731	158	46,019	155	41,346
New & Competing.....	81	17,935	61	13,553	20	5,795
Supplemental.....	0	0	0	0	0	0
TOTAL, RESEARCH GRANTS.....	236	58,666	219	59,572	175	47,141
TOTAL CONTRACTS/IAAs.....		37,294		36,712		9,500
TOTAL.....		95,960		96,284		56,641

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information about the Agency for Healthcare Research and Quality (AHRQ) and are provide for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ into the National Institutes of Health (NIH), and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

5-Year Funding Table:

FY 2017:	\$88,731,000
FY 2018:	\$94,284,000
FY 2019 Final:	\$95,960,000
FY 2020 Enacted:	\$96,284,000
FY 2021 President's Budget	\$56,641,000

Key Outputs and Outcomes Tables with Performance Narrative: Health Services Research, Data and Dissemination (HSR)

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2020 Target	FY 2021 Target	FY 2021 Target +/-FY 2020 Target
<p>2.3.8 Increase the availability of electronic clinical decision support tools related to safe pain management and opioid prescribing (Output)</p>	<p>FY 2019: Continued to work with federal partners, i.e. CDC uses AHRQ CDS Connect web platform to disseminate two opioid CDS tools.</p> <p>Target: Partner with stakeholders to identify additional evidence-based electronic clinical decision tools related to safe pain management and opioid prescribing and make them publicly available</p> <p>(Target Met)</p> <p>FY 2019: Disseminated a safe pain management and opioid-related clinical decision support (CDS) through CDS Connect.</p> <p>Target: Test, revise, and disseminate at least one new electronic clinical decision tool related to safe pain management and opioid prescribing</p> <p>(Target Met)</p>	<p>Develop, test, and disseminate at least one electronic clinical decision support tool related to opioids or safe chronic pain management</p>	<p>Evaluate electronic clinical decision support tools related to chronic pain management and disseminate results of the evaluation</p>	<p>N/A</p>

2.3.8: Increase the availability of electronic clinical decision support tools related to safe pain management and opioid prescribing

Addressing the nation’s opioid epidemic is an ongoing focus of NIRSQ’s Health Services Research, Data, and Dissemination portfolio. In FY 2017, AHRQ contributed to all five pillars of the Department of Health and Human Services comprehensive opioids strategy. Our work included practical health services research, data explorations, and public dissemination. Our dissemination activities included producing systematic evidence reviews on non-opioid pain management and the use of naloxone by emergency medical service personnel and publishing a collection of over 250 field-tested tools to support the delivery of Medication Assisted Treatment

(MAT) in primary care settings. Using AHRQ data platforms, AHRQ produced a series of analysis documenting trends in health care utilization fueled by the opioid epidemic at state and national levels and which uncovered the diverse ways in which the crisis is manifesting itself across the country. In FY 2017, AHRQ also continued to support both investigator-initiated health services research on the prevention and treatment of opioid addiction by health care delivery organizations and targeted health services research expanding access to MAT in rural communities through primary care.

In FY 2017, AHRQ initiated a new initiative to ensure that health care professionals have access to evidence supporting safe pain management and opioid prescribing at the point of care through electronic clinical decision support (CDS). This effort is part of AHRQ's overall CDS initiative, funded by resources from the Patient-Centered Outcomes Research Trust Fund, to advance evidence into practice through CDS and to make CDS more shareable, standards-based, and publicly-available. The infrastructure for developing and sharing these CDS tools is called CDS Connect (<https://cds.ahrq.gov>).

In FY 2018, AHRQ developed a dashboard that aggregates pain-related information from the EHR into one consolidated view for clinicians. The information includes data such as pain medications, pain assessments, relevant diagnoses, and lab test results. The dashboard was tested in partnership with OCHIN, a network of community health centers, and uses the HL7 FHIR standard, which allows for interoperability and implementation in different EHRs.

In FY 2019, AHRQ disseminated safe pain management and opioid-related CDS through CDS Connect. This includes the pain management dashboard developed in FY 2018. AHRQ continues to present its work in CDS at national meetings of key organizations, such as the American Medical Informatics Association and the Healthcare Information and Management Systems Society. In addition, AHRQ will continue to work with its federal partners to disseminate safe pain management and opioid CDS tools. For example, the CDC uses AHRQ's CDS Connect web platform as a dissemination mechanism for two opioid CDS tools that were developed by CDC and ONC. At the end of FY 2019, AHRQ awarded two new contracts to develop additional CDS for chronic pain management.

In FY 2020, the two new contracts will develop and test the CDS for chronic pain management. Each contract will develop both clinician- and patient-facing CDS applications. Once ready, the new CDS will be disseminated through AHRQ's CDS Connect platform.

In FY 2021, each of the two new contracts will perform a self-evaluation of their development and dissemination work for chronic pain management CDS. This is in addition to a separate evaluation of AHRQ/NIRSQ's overall CDS initiative.

HCQO: Improving Maternal Morbidity and Mortality Through Data & Analytics				
	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$ 0	\$ 0	\$ 7,350,000	\$ +7,350,000

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act
 Act FY 2021 Authorization.....Expired.
 Allocation Method..... Contracts, and Other.

Improving Maternal Morbidity and Mortality through Powering State and Local Innovation through Data and Analytics: HHS is preparing to address the complex challenge of ensuring safe and healthy pregnancies and childbirth. Today 700 or more American women die each year as a result of pregnancy and childbirth and over 50,000 experience severe complications. These outcomes are not evenly distributed, with underserved women, including African-American, being at substantially higher risk of complication and death. The root causes of this crisis in American health and health care are multifaceted and so must the solutions be. HHS will need to lead the nation in addressing problems in prenatal, intrapartum, and postpartum care. It will also require focusing on helping women thrive before pregnancy and manage conditions unveiled during pregnancy.

To make informed, evidence-based decisions to improve maternal morbidity and mortality, policymakers, healthcare system leaders, researchers, clinicians, and patients need better data and information about the health care system. They need a 360° view of U.S. healthcare system. Together, the three components of this initiative build the foundation for that view.

FY 2021 President’s Budget Policy: The FY 2021 President’s Budget provides an increase of \$7.4 million for the first year of a 5-year initiative, within the existing portfolios of Health Services Research, Data, and Dissemination (*\$5.75 million*) and the Medical Expenditure Panel Survey (*\$1.6 million*). The goal of the proposed initiative is to ensure that Federal, State, and local policymakers have timely and accurate data and useful analytic resources about maternal morbidity and mortality and the healthcare system with which to make informed policy decisions.

Specifically, this initiative has three components:

1. Expanding the Capacity of States to Link Healthcare and Social Service Data to Improve Evidence-based Policy Making: AHRQ has experience partnering with states to improve data collection and analysis capabilities as exemplified by the HCUP project. Aligned with the HHS maternal mortality framework, NIRSQ will partner with two to three states and provide customized technical assistance and financial support to catalyze the development of state-level data infrastructure and analytics capability that links healthcare data and social service data to provide a 360 degree view of the pregnancy, delivery, and early childhood support system in the state. This project will target states in the lower quartile of maternal morbidity and mortality outcomes.
2. An Analytic Strike Team To Provide Rapid Response Information Using Predictive Analytics to Address Emerging Policy Issues: NIRSQ will create a predictive analytic program with internal capacity to address rapid-cycle requests for HHS and other priority

audiences. Initially, NIRSQ will develop a proof of concept to then develop “stand-ready” capacity to conduct rapid-cycle analyses. Initial use cases will focus on issues surrounding maternal morbidity and mortality, including prevention. As the program matures, NIRSQ will make methods and algorithms publicly available for States and other stakeholders to deploy using their own data to address unique concerns.

3. Expanded Capacity of the MEPS for State Estimates: By augmenting the MEPS sample by an additional 1,000 completed households (2,300 persons) each year and redistributing sample across States, MEPS will improve its national estimates and increase NIRSQ’s capacity for making estimates of individual States and groups of States. An additional 1,000 completed interviews in each MEPS panel will produce improvements in precision of State-level estimates for an additional 36 States and D.C. (all except the seven smallest States). This augmentation will also improve the ability of MEPS to support analyses of maternal morbidity and mortality as well as for other conditions of interest and for key population subgroups, including analyses by insurance status.

Estimated Performance Impact: Potential measures of success include:

- New partnerships with states that expand their ability to link human services and health care data to provide a 360 degree view of prenatal, maternity, and post-partum care and outcomes.
- Enhanced ability to respond to requests for information from Federal and State policymakers and the public
- Enriched ability to provide State estimates on conditions and populations of interest through the MEPS data platform

Mechanism Table:

Improving Maternal Mortality through Data & Analytics ^{1/}

(Dollars in Thousands)

	AHRQ FY 2019 Final		AHRQ FY 2020 Enacted		NIRSQ FY 2021 President's Budget	
	No.	Dollars	No.	Dollars	No.	Dollars
RESEARCH GRANTS						
Non-Competing.....	0	0	0	0	0	0
New & Competing.....	0	0	0	0	0	0
Supplemental.....	0	0	0	0	0	0
TOTAL, RESEARCH GRANTS.....	0	0	0	0	0	0
TOTAL CONTRACTS/IAAs.....		0		0		7,350
TOTAL.....		0		0		7,350

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information about the Agency for Healthcare Research and Quality (AHRQ) and are provide for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ into the National Institutes of Health (NIH), and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

5-Year Funding Table:

FY 2017:	\$	0
FY 2018:	\$	0
FY 2019 Final:	\$	0
FY 2020 Enacted:	\$	0
FY 2021 President's Budget:	\$	7,350,000

HCQO: U.S. Preventive Services Task Force				
	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$ 11,610,000	\$ 11,649,000	\$ 7,400,000	\$ (4,249,000)

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act
 Act FY 2021 Authorization.....Expired.
 Allocation Method..... Contracts, and Other.

U.S. Preventive Services Task Force (USPSTF): The U.S. Preventive Services Task Force (USPSTF) is an independent, volunteer panel of nationally-recognized experts in prevention and evidence-based medicine. The Task Force makes evidence-based recommendations about clinical preventive services to improve the health of all Americans (e.g., by improving quality of life and prolonging life). Since 1998, AHRQ has been authorized by Congress to provide ongoing scientific, administrative and dissemination support to assist the USPSTF in meeting its mission. AHRQ is the sole funding source of the USPSTF. AHRQ supports the USPSTF by ensuring that it has: the evidence it needs in order to make its recommendations; the ability to operate in an open, transparent, and efficient manner; and the ability to clearly and effectively share its recommendations with the health care community and general public.

Major FY 2019 accomplishments for the USPSTF include:

- Maintained recommendation statements for 85 preventive service topics with 134 specific recommendation grades. Many recommendation statements include multiple recommendation grades for different populations.
- Received 9 nominations for new topics and 8 nominations to reconsider or update existing topics.
- Posted 11 draft research plans for public comments.
- Posted 14 draft recommendation statements for public comments.
- Posted 17 draft evidence reports for public comments.
- Published 13 final recommendation statements in a peer-reviewed journal.

To do its work, the Task Force uses a four-step process:

1. **Step 1: Topic Nomination.** Anyone can nominate a new topic or an update to an existing topic at any time, via the Task Force Web site.
2. **Step 2: Draft and Final Research Plans.** The Task Force develops a draft research plan for the topic, which is posted on the Task Force Web site for a 4-week public comment period. The Task Force reviews and considers all comments as it finalizes the research plan.
3. **Step 3: Draft Evidence Review and Draft Recommendation Statement.** The Task Force reviews all available evidence on the topic from studies published in peer-reviewed scientific journals. The evidence is summarized in the draft evidence review and used to develop the draft recommendation statement. These draft materials are posted on the Task Force Web site for a 4-week public comment period.
4. **Step 4: Final Evidence Review and Final Recommendation Statement.** The Task Force considers all comments on the draft evidence review and recommendation statement as it finalizes the recommendation statement.

FY 2021 President’s Budget Policy: The FY 2021 President’s Budget level for the USPSTF is \$7.4 million, a decrease of \$4.3 million from the FY 2020 Enacted level. With these funds NIRSQ will continue to maintain support for the Task Force, but at a reduced scope (including scientific, methodological, and dissemination support). The FY 2021 President’s Budget will allow the USPSTF to make recommendations on approximately 6 topics, 6 fewer than the historical average for the Task Force.

Program Portrait: Recommendation on Preexposure Prophylaxis for Prevention of Human Immunodeficiency Virus (HIV) Infection

Ending the HIV epidemic is one of the top priorities identified by the President and Department of Health and Human Services (HHS) Secretary. An estimated 1.1 million individuals in the United States are currently living with HIV, and more than 700,000 persons have died of AIDS. Although treatable, HIV infection has no cure and has significant health consequences.

Given the importance, prevalence, and negative health effects of HIV, the USPSTF sought to review whether Pre-exposure prophylaxis (PrEP) (a daily medication) is beneficial in preventing HIV in high risk populations. To do this, the USPSTF commissioned a systematic review of the scientific evidence. This is the first time the USPSTF has reviewed the evidence on this topic to develop a new recommendation. Based on this evidence, the USPSTF recommends that clinicians offer PrEP with effective antiretroviral therapy to persons who are at high risk of HIV acquisition.

The USPSTF is committed to transparency when developing its recommendations. Therefore, it also sought input on its draft recommendation from the public, topic experts and clinical specialists, patients, and other stakeholders. The USPSTF also worked closely with other Federal agencies, as well as professional organizations that deliver care. The USPSTF reviewed and considered all of this input when finalizing its recommendations.

The final recommendation was published in the *Journal of the American Medical Association* in June 2019. It received a lot of national attention with extensive media coverage in over 630 news articles. For example, it received coverage from media outlets including *Time*, *Politico*, *CNBC*, *ABC News* and *CNN*.

Mechanism Table:
 U.S. Preventive Services Task Force ^{1/}
 (Dollars in Thousands)

	AHRQ FY 2019 Final		AHRQ FY 2020 Enacted		NIRSQ FY 2021 President's Budget	
	No.	Dollars	No.	Dollars	No.	Dollars
<u>RESEARCH GRANTS</u>						
Non-Competing.....	0	0	0	0	0	0
New & Competing.....	0	0	0	0	0	0
Supplemental.....	0	0	0	0	0	0
TOTAL, RESEARCH GRANTS.....	0	0	0	0	0	0
TOTAL CONTRACTS/IAAs.....	11,610		11,649		7,400	
TOTAL.....	11,610		11,649		7,400	

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information about the Agency for Healthcare Research and Quality (AHRQ) and are provide for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ into the National Institutes of Health (NIH), and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

5-Year Funding Table:

FY 2017:	\$11,649,000
FY 2018:	\$11,649,000
FY 2019 Final:	\$11,610,000
FY 2020 Enacted:	\$11,649,000
FY 2021 President's Budget:	\$ 7,400,000

Key Outputs and Outcomes Table with Performance Narrative: United States Preventive Services Task Force (USPSTF):

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2020 Target	FY 2021 Target	FY 2021 Target +/-FY 2020 Target
2.3.7 Increase the percentage of older adults who receive appropriate clinical preventive services (Output)	FY 2019: Collected and began analysis of PSAQ data Target: Prepare for and collect PSAQ data again in FY 2019 (Target Met)	New data for the PSAQ prevention items available Begin analysis of the FY 2018 and 2019 data collected 2020 PSAQ data collection will begin.	2021 PSAQ data collection continues.	N/A

2.3.7: Increase the percentage of adults who receive appropriate clinical preventive services

In FY 2019, AHRQ continued to provide ongoing scientific, administrative and dissemination support to the U.S. Preventive Services Task Force (USPSTF). The Task Force makes evidence-based recommendations about clinical preventive services to improve the health of all Americans (e.g., by improving quality of life and prolonging life). By supporting the work of the USPSTF, AHRQ helps to identify appropriate clinical preventive services for adults, disseminate clinical preventive services recommendations, and develop methods for understanding prevention in adults.

For several years, AHRQ has invested in creating a national measure of the receipt of appropriate clinical preventive services by adults (measure 2.3.7). A necessary first step in creating quality improvement within health care is measurement and reporting. Without the ability to know where we are and the direction we are heading, it is difficult to improve quality. This measure will allow AHRQ to assess where improvements are needed most in the uptake of clinical preventive services. It will help AHRQ support the USPSTF by targeting its recommendations and dissemination efforts to the populations and preventive services of greatest need. Thus, making sure the right people get the right clinical preventive services, in the right interval. The data from this measure can also identify gaps in the receipt of preventive services and therefore inform the Department’s and the public health sector’s prevention strategies.

AHRQ now has a validated final survey to collect data on the receipt of appropriate clinical preventive services among adults (the Preventive Services Self-Administered Questionnaire (PSAQ) in the AHRQ Medical Expenditure Panel Survey (MEPS)). The survey was fielded in a

pilot test in 2015. It is a self-administered questionnaire that will be included as part of the standard MEPS starting in 2018. In FY 2017, AHRQ developed a baseline for national estimates of receipt of high-priority clinical preventive services among adults for this performance measure. Survey results found that eight percent of adults (35+) received all of the high priority, appropriate clinical preventive services (95% Confidence Interval: 6.5% to 9.5%). In FY 2019, AHRQ published a report describing these baseline results by age and sex.

In FY 2018/2019 and FY 2020/2021, AHRQ will administer the PSAQ again. The panel design of the survey, which features several rounds of interviewing covering two full calendar years, makes it possible to determine how changes in respondents' health status, income, employment, eligibility for public and private insurance coverage, use of services, and payment for care are related. Once data is collected, it is reviewed for accuracy and prepared to release to the public. AHRQ expects data to be available in 2020 and analysis can begin thereafter. Additional years of data will allow for AHRQ to track and compare receipt of high priority, appropriate clinical preventive services over time.

Medical Expenditure Panel Survey				
	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$69,755,000	\$69,991,000	\$71,791,000	+\$1,800,000

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act
 FY 2021 Authorization.....Expired.
 Allocation Method..... Contracts and Other.

Medical Expenditure Panel Survey (MEPS): MEPS, first funded in 1995, is the only national source for comprehensive annual data on how Americans use and pay for medical care. The MEPS is designed to provide annual estimates at the national level of the health care utilization, expenditures, and sources of payment and health insurance coverage of the U.S. civilian non-institutionalized population. The funding requested primarily supports data collection and analytical file production for the MEPS family of interrelated surveys, which include a Household Component (HC), a Medical Provider Component (MPC), and an Insurance Component (IC). In addition to collecting data that support annual estimates for a variety of measures related to health insurance coverage, healthcare use and expenditures, MEPS provides estimates of measures related to health status, demographic characteristics, employment, access to health care and health care quality. The survey also supports estimates for individuals, families and population subgroups of interest. The data collected in this ongoing longitudinal study also permit studies of the determinants of insurance take-up, use of services and expenditures as well as changes in the provision of health care in relation to social and demographic factors such as employment and income; the health status and satisfaction with care of individuals and families; and the health needs of specific population groups such as racial and ethnic minorities, the elderly and children.

MEPS data continue to be essential for the evaluation of health policies and analysis of the effects of tax code changes on health expenditures and tax revenue. Key data uses include:

- MEPS IC data are used by the Bureau of Economic Analysis in computing the nation’s GDP
- MEPS HC and MPC data are used by the Congressional Budget Office, Congressional Research Service, the Treasury and others to inform high level inquiries related to healthcare expenditures, insurance coverage and sources of payment
- MEPS is used extensively to inform policymakers with respect to the Children’s Health Insurance Program and its reauthorization
- MEPS is used extensively by the GAO in its studies of the U.S. healthcare system and subsequent reports as requested by the Senate Committee on Health, Education, Labor and Pensions
- MEPS is used by CMS to inform the National Health Expenditure Accounts
- MEPS is used extensively by the health services research community as the primary source of high quality national data for studies related to healthcare expenditures and out-of-pocket costs and examinations of expenditures related to specific types of health conditions.

Please see the Program Portrait on page 48 for key findings from FY 2019.

FY 2021 President's Budget Policy: The FY 2021 President's Budget level for the MEPS is \$71.8 million, an increase of \$1.8 million from the FY 2020 Enacted level. A total of \$70.0 million is required for base funding. Base funding will allow NIRSQ to continue to provide ongoing support to the MEPS, allowing the survey to maintain the precision levels of survey estimates, maximize survey response rates, and the timeliness, quality and utility of data products specified for the survey in prior years.

An additional \$1.8 million will be directed to expanding the capacity of the MEPS to address HHS priorities. By both augmenting the sample by 1,000 completed households (2,300 persons) and by redistributing sample across states, MEPS will improve its national estimates and increase our capacity for making estimates of individual states and groups of states, particularly rural states and those with relatively small populations. An additional 1,000 completed household interviews could be used to produce improvements in the precision of State level estimates for about 36 States and D.C. (i.e. all except the 7 largest and 7 smallest States). This augmentation will also enhance the ability of MEPS to support analyses of key population subgroups, such as persons with specific conditions and those at particular income levels or age groups, as well as analyses by insurance status. In the implementation of this investment, MEPS will engage with organizations with interest and expertise in state health matters, such as the State Health Access Data Assistance Center (SHADAC), the National Governors Association (NGA), the National Council of State Legislators (NCSL), and National Association of Counties (NACo) to assist with dissemination activities. The enhanced data will also be disseminated through the program's existing extensive network of users, which includes numerous universities, research organizations, and national, state, and local agencies and organizations. (\$1.8 million in FY 2021 with out year costs of \$1.1 million in FY 2022 and \$0.590 million in FY 2023.)

This initiative will provide increased capacity to examine medical care access, use, spending and health outcomes both across states and for population subgroups, which will enhance researchers' and policymakers' ability to bring comprehensive data to bear on policy questions related HHS priority issues. This enhancement to the MEPS will make it an even more powerful tool for state and federal policy and decision makers. For example, it will improve the utility of the MEPS for examinations of medical care utilization and expenditures across states, allowing more precise comparisons across more states and regions, and provide a more solid basis for predicting the impact of state level policy changes on programs such as Medicaid and CHIP. Improvements to these programs will have a positive impact on system efficiency and outcomes, which can improve the value of care provided and increase the quality of care for patients.

Mechanism Table:

MEPS Mechanism Table ^{1/}

(Dollars in Thousands)

	AHRQ FY 2019 Final		AHRQ FY 2020 Enacted		NIRSQ FY 2021 President's Budget	
	No.	Dollars	No.	Dollars	No.	Dollars
<u>RESEARCH GRANTS</u>						
Non-Competing.....	0	0	0	0	0	0
New & Competing.....	0	0	0	0	0	0
Supplemental.....	0	0	0	0	0	0
TOTAL, RESEARCH GRANTS.....	0	0	0	0	0	0
TOTAL CONTRACTS/IAAs.....	69,755		69,991		71,791	
TOTAL.....	69,755		69,991		71,791	

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information about the Agency for Healthcare Research and Quality (AHRQ) and are provide for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ into the National Institutes of Health (NIH), and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

5-Year Funding Table:

FY 2017:	\$66,000,000
FY 2018:	\$69,991,000
FY 2019 Final:	\$69,755,000
FY 2020 Enacted:	\$69,991,000
FY 2021 President's Budget:	\$71,791,000

Program Portrait: Medical Expenditure Panel Survey (MEPS)

FY 2020 Enacted Level: \$69.991 million

FY 2021 President's Budget: 71.791 million

Change: +\$1.800 million

The MEPS Insurance Component (IC) collects nationally representative information from private employers and State and local governments that can be used to examine a broad range of issues related to the provision of employer-sponsored health insurance coverage. The MEPS Household Component (HC) collects nationally representative information from household respondents on demographic characteristics, socioeconomic status, health insurance status, access to care, health status, chronic conditions and use of health care services that can be used to examine a broad range of important health issues. Following are key findings from recent research that used the MEPS IC and the MEPS HC to address topics relevant to Secretarial priorities regarding health insurance reform, drug pricing and opioids.

Trends in Employer-Sponsored Insurance (using MEPS IC data on private sector workers):

- In 2018, average health insurance premiums were \$6,715 for single coverage, \$13,425 for employee-plus-one coverage, and \$19,565 for family coverage, representing increases over 2017 levels of 5.4 percent for single coverage, 5.0 percent for employee-plus-one coverage, and 4.7 percent for family coverage.
- Overall, average individual and family deductible levels did not increase between 2017 and 2018. This was the first year without a significant increase in deductible levels in the 2008 to 2018 period.
- In 2018, average individual and family deductibles were lower in large firms with 100 or more employees (\$1,692 and \$3,179, respectively) than in small firms with fewer than 50 employees (\$2,327 and \$4,364, respectively) and medium firms with 50 to 99 employees (\$2,369 and \$4,755, respectively).
- These results can inform efforts to improve availability and affordability of employment-based insurance.

Trends in Retail Drug Prices and Out-of-Pocket Costs (using data from the MEPS HC):

- From 2011 to 2016, the share of fills dispensed with non-specialty single source drugs fell from 22.2 to 11.2 percent, while the share filled with non-specialty generics increased from 71.5 to 83.4 percent.
- In 2016, mean retail unit prices (i.e., price per pill) ranged from \$1.00 for non-specialty generic drugs to \$324.65 for specialty drugs; the privately insured had overall mean retail unit prices (\$14.46) that were two to three times higher than overall mean retail unit prices for Medicare Part D (\$6.95), Medicaid (\$7.67), and the uninsured (\$4.25).
- From 2011 to 2016, out-of-pocket unit costs and out-of-pocket shares declined substantially for all insurance groups for all types of non-specialty drugs.
 - In 2016, mean out-of-pocket unit costs were lowest for non-specialty generic drugs (\$.23) and highest for specialty drugs (\$12.15). Conversely, the mean out-of-pocket share was highest for generic drugs (41.8 percent) and lowest for specialty drugs (10.8 percent).
 - In 2016, the uninsured had the highest out-of-pocket unit costs followed by the privately insured. Medicaid recipients, veterans, and individuals covered by TRICARE were typically able to acquire prescriptions with no out-of-pocket cost.
- These results can contribute to efforts to understand, and address, challenges faced by individuals and third party payers in financing purchases of retail prescription drugs.

Comparing Opioid Use by Adults with and without Chronic Pain (using data from the MEPS HC):

- On average, during the 3 years from 2013 to 2015, individuals treated for conditions associated with chronic pain comprised only about 14 percent of all adults but comprised more than one-third (36.2 percent) of adult opioid users and used about half (52.8 percent) of opioid prescription fills for adults.
- Among adults treated for conditions associated with chronic pain, the percentage with any opioid use was slightly higher among the elderly and those aged 45-64 than those aged 18-44. Conversely, among adults only treated for non-chronic conditions, the percentage with any opioid use was higher among the non-elderly than the elderly.
- Among non-elderly adults treated for chronic pain conditions, nearly two-thirds of those covered by public insurance had at least one opioid fill compared to only about one-third of those with private coverage or no insurance.
- These results can contribute to efforts to make appropriate use of outpatient prescription opioids which can be effective in relieving pain, but also carry serious risks of opioid use disorder and overdose.

Key Outputs and Outcomes Table and Performance Narrative: Medical Expenditure Panel Survey (MEPS)

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2020 Target	FY 2021 Target	FY 2021 Target +/-FY 2020 Target
1.3.16 Maintain the number of months to produce the Insurance Component tables following data collection (MEPS-IC) (Output)	FY 2019: 6 months Target: 6 months (Target Met)	6 months	6 months	Maintain
1.3.19 Increase the number of tables per year added to the MEPS table series (Output)	FY 2019: 9886 total tables in MEPS table series Target: 9627 total tables in MEPS table series	10,136 total tables in MEPS table series	10,386 total tables in MEPS table series	+250 total tables in MEPS table series
1.3.21 Decrease the number of months required to produce MEPS data files (i.e. point-in-time, utilization and expenditure files) for public dissemination following data collection (MEPS-HC) (Output)	FY 2019: 9 months Target: 9 months (Target Met)	9 months	9 months	Maintain

The Medical Expenditure Panel Survey (MEPS) data have become the linchpin for economic models of health care use and expenditures. The data are key to estimating the impact of changes in financing, coverage and reimbursement policy on the U.S. healthcare system. No other surveys provide the foundation for estimating the impact of changes in national policy on various segments of the US population. These data continue to be key for the evaluation of health reform policies and analyzing the effect of tax code changes on health expenditures and tax revenue.

1.3.16: Maintain the number of months to produce the Insurance Component tables following data collection (MEPS-IC)

The MEPS-IC measures the extent, cost, and coverage of employer-sponsored health insurance on an annual basis. These statistics are produced at the National, State, and sub-State (metropolitan area) level for private industry. Statistics are also produced for State and Local governments. Special request data runs, for estimates not available in the published tables, are made for Federal and State agencies as requested.

The MEPS-IC provides annual National and State estimates of aggregate spending on employer-sponsored health insurance for the National Health Expenditure Accounts (NHEA) that are maintained by CMS and for the Gross Domestic Product (GDP) produced by Bureau of Economic Analysis (BEA). MEPS-IC State-level premium estimates are the basis for determining the average premium limits for the federal tax credit available to small businesses that provide health insurance to their employees. MEPS-IC estimates are used extensively for analyses by federal agencies including:

- Congressional Budget Office (CBO);
- Congressional Research Service (CRS);
- Department of Treasury;
- The U.S. Congress Joint Committee on Taxation (JCT);
- The Council of Economic Advisors, White House;
- Department of Health and Human Services (HHS), including
- Assistant Secretary for Planning and Evaluation (ASPE)
- Centers for Medicare & Medicaid Services (CMS)

Schedules for data release will be maintained for FY 2020 through FY 2021. Further reducing the target time is not feasible because the proration and post-stratification processes are dependent upon the timing and availability of key IRS data that are appended to the survey frame. Data trends from 1996 through 2018 are mapped using the MEPSnet/IC interactive search tool. In addition, special runs are often made for federal and state agencies that track data trends of interest across years.

1.3.19: Increase the number of tables included in the MEPS Tables Compendia.

The MEPS HC Tables Compendia has recently been updated moving to a more user friendly and versatile [format](#) . Interactive tables are provided for the following: use, expenditures and population; health insurance, accessibility and quality of care; medical conditions and prescribed drugs.

The MEPS Tables Compendia is scheduled to be expanded a minimum of 250 tables per year. For the Insurance Component there are a total of 2,814 national level tables and 5,776 state and metro area tables. The total number of tables available to the user population is currently 8,540.

The MEPS Tables Compendia is a source of important data that is easily accessed by users. Expanding the content and coverage of these tables furthers the utility of the data for conducting research and informing policy. Currently data are available in tabular format for the years 1996 – 2018. This represents twenty years of data for both the Household and Insurance Components, enabling the user to follow trends on a variety of topics.

1.3.21: MEPS-HC: Maintain no more than a 9 month data lag between completion of data collection and dissemination of the MEPS data public use files

In coordination with the MEPS Household Component contractor the Center for Financing, Access and Cost Trends (CFACT) senior leadership have met on a continuing basis to establish a strategy to address the delivery schedule. The following steps have and will continue to be taken in an effort to release public use files as early as possible: 1) data editing now takes place in waves (batch processing) rather than data processing taking place all at once at the completion of data collection; 2) processing of multiple data sets now takes place concurrently rather than consecutively, thus multiple processes take place at any given point in time; 3) duplicative processes have either been eliminated or combined with similar processes; 4) review time of intermediate steps was reduced; 5) the contractor has eliminated a number of edits or streamlined such processes where they were determined to provide minimal benefit in relation to the resources utilized; and 6) contractor editing staff have been cross-trained in order to more efficiently distribute work assignments.

AHRQ achieved the data release schedule for all the targeted MEPS public release files scheduled for release during FY 2019. The MEPS program is on target to also meet the data release schedule for the MEPS public use files scheduled for release during FY 2020. The release date for public use files (jobs, home health, other medical expense, dental visits, medical provider visits, outpatient department visits, emergency room visits, hospital stays, prescribed drugs, and full year consolidated) will be maintained moving from FY 2019 to FY 2020. The current release dates for all public use files will be maintained for FY 2021.

The data delivery schedule increases the timeliness of the data and thus maximizes the public good through the use of the most current medical care utilization and expenditure data possible. Such data are used for policy and legislative analyses at the Federal, state and local levels as well as the private health care industry and the health services research community in an effort to improve the health and well-being of the American people.

Research Management and Support				
	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$71,060,000	\$71,300,000	\$53,551,000	\$(17,749,000)
FTE	257	273	238	-35

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act
 FY 2021 Authorization.....Expired.
 Allocation Method..... Other.

Research Management and Support (RMS): RMS (formerly known as Program Support) activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards, and research and development contracts. RMS functions also encompass strategic planning, coordination, and evaluation of the Institute’s programs, regulatory compliance, international coordination, and liaison with other Federal agencies, Congress, and the public.

FY 2021 President’s Budget Policy: The FY 2021 President’s Budget level for Research Management and Support (RMS) is \$53.5 million, a decrease of \$17.7 million from the FY 2020 Enacted level. In FY 2021, the reorganization will transition AHRQ activities to the NIH as an Institute and end some programmatic activities. This reduction in scope necessitates a decrease of 36 FTEs funded with discretionary accounts at the 2020 Enacted level. The FY 2021 President’s Budget for Research Management and Support provides necessary one-time support related to close-out activities for research that is ending and workforce reduction expenses, as well as ongoing research management costs related to moving AHRQ’s activities to the National Institute of Health (NIH).

As shown below, AHRQ does have additional FTEs supported with other funding sources, including an estimated 1 FTE from other reimbursable funding and an estimated 7 FTEs supported by the Patient-Centered Outcomes Research Trust Fund. The estimate for the PCORTF is preliminary and will be finalized once activities are decided for FY 2020.

	FY 2019 Final	FY 2020 Enacted	FY 2021 President’s Budget
FTEs – Budget Authority	256	272	237
FTEs – PCORTF	7	7	7
FTEs – Other Reimbursable	1	1	1

Mechanism Table:

Research Management and Support (Program Support)

(Dollars in Thousands) ^{1/}

	AHRQ FY 2018 Final		AHRQ FY 2019 Enacted		NIRSQ FY 2021 President's Budget	
	No.	Dollars	No.	Dollars	No.	Dollars
RESEARCH GRANTS						
Non-Competing.....	0	0	0	0	0	0
New & Competing.....	0	0	0	0	0	0
Supplemental.....	0	0	0	0	0	0
TOTAL, RESEARCH GRANTS.....	0	0	0	0	0	0
TOTAL CONTRACTS/IAAs.....	71,060		71,300		53,551	
TOTAL.....	71,060		71,300		53,551	

^{1/} For this and all other tables, the FY 2018 and FY 2019 columns contain information about the Agency for Healthcare Research and Quality (AHRQ) and are provide for convenience and transparency. The FY 2020 President's Budget consolidates AHRQ into the National Institutes of Health (NIH), and the FY 2020 column represents the request for the National Institute for Research on Safety and Quality.

5-Year Funding Table:

FY 2017:	\$70,844,000
FY 2018:	\$71,300,000
FY 2019 Final:	\$71,060,000
FY 2020 Enacted:	\$71,300,000
FY 2021 President's Budget:	\$53,551,000

NATIONAL INSTITUTES OF HEALTH
National Institute for Research on Safety and Quality

Budget Authority by Object ^{1/ 2/}

<u>Personnel compensation:</u>	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
Full-time permanent (11.1).....	30,089,493	32,182,770	26,107,731	(6,075,040)
Other than full-time permanent (11.3).....	3,689,081	3,700,517	3,052,653	(647,864)
Other personnel compensation (11.5).....	1,102,409	1,105,826	954,696	(151,131)
Military personnel (11.7).....	656,573	658,608	527,062	(131,546)
Special personnel services payments (11.8).....				
Subtotal personnel compensation.....	35,537,556	37,647,722	30,642,142	(7,005,581)
Civilian benefits (12.1).....	10,574,215	10,606,995	8,101,907	(2,505,088)
Military benefits (12.2).....	288,524	289,418	224,788	(64,631)
Benefits to former personnel (13.0).....	12,906	12,946		(12,946)
Total Pay	46,413,201	48,557,082	38,968,836	(9,588,246)
Travel and transportation of persons (21.0).....	194,527	198,418	255,000	56,582
Transportation of things (22.0).....	22,000	22,000	5,100	(16,900)
Rental payments to GSA (23.1).....	3,047,166	3,108,109	2,856,000	(252,109)
Rental payments to Others (23.2).....				
Communication, utilities, and misc. charges (23.3).....	155,059	155,059	102,000	(53,059)
Printing and reproduction (24.0).....	2,100	2,100	2,100	
Other Contractual Services:				
Advisory and assistance services (25.1).....				
Other services (25.2).....	9,577,253	9,768,798	10,665,364	896,566
Purchase of goods and services from government accounts (25.3).....	22,167,264	18,139,421	11,724,858	(6,414,563)
Operation and maintenance of facilities (25.4).....				
Research and Development Contracts (25.5).....	140,870,661	139,861,000	105,672,362	(34,188,642)
Medical care (25.6).....				
Operation and maintenance of equipment (25.7).....	422,895	422,895	346,800	(76,095)
Subsistence and support of persons (25.8).....				
Subtotal Other Contractual Services.....	173,038,073	168,192,118	128,409,384	(39,782,734)
Supplies and materials (26.0).....	105,266	105,266	122,400	17,134
Equipment (31.0).....	285,149	290,852	204,000	(86,852)
Investments and Loans (33.0).....				
Grants, subsidies, and contributions (41.0).....	113,240,864	117,368,996	85,735,180	(31,633,816)
Insurance Claims and Indemnities (42.0).....	250,000			
Refunds (44.0).....				
Total Non-Pay Costs.....	290,340,204	289,442,918	217,691,164	(71,751,754)
Total Budget Authority by Object Class.....	336,753,405	338,000,000	256,660,000	(81,340,000)

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

^{2/} Does not include mandatory financing from the PCORTF.

NATIONAL INSTITUTES OF HEALTH
National Institute for Research on Safety and Quality
Salaries and Expenses^{1/2/}

<u>Personnel compensation:</u>	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
Full-time permanent (11.1).....	30,089,493	32,182,770	26,107,731	(6,075,040)
Other than full-time permanent (11.3).....	3,689,081	3,700,517	3,052,653	(647,864)
Other personnel compensation (11.5).....	1,102,409	1,105,826	954,696	(151,131)
Military personnel (11.7).....	656,573	658,608	527,062	(131,546)
Subtotal personnel compensation.....	35,537,556	37,647,722	30,642,142	(7,005,581)
Civilian benefits (12.1).....	10,574,215	10,606,995	8,101,907	(2,505,088)
Military benefits (12.2).....	288,524	289,418	224,788	(64,631)
Benefits to former personnel (13.0).....	<u>12,906</u>	<u>12,906</u>	<u>0</u>	<u>(12,946)</u>
Total Pay Costs.....	46,413,201	48,557,082	38,968,836	(9,588,246)
Travel and transportation of persons (21.0).....	194,527	198,418	255,000	56,582
Transportation of things (22.0).....	22,000	22,000	5,100	(16,900)
Rental payments to GSA (23.1).....	3,047,166	3,108,109	2,856,000	(252,109)
Communication, utilities, and misc. charges (23.3).....	155,059	155,059	102,000	(53,059)
Printing and reproduction (24.0).....	2,100	2,100	2,100	0
Other Contractual Services:				
Other services (25.2).....	9,577,253	9,768,798	8,706,221	(1,062,577)
Purchase of goods and services from govt accounts (25.3).....	3,748,237	3,823,202	1,982,543	(1,840,659)
Research and Development Contracts (25.5).....	6,833,223	4,859,165	0	(4,859,165)
Operation and maintenance of equipment (25.7).....	422,895	422,895	346,800	(76,095)
Subtotal Other Contractual Services.....	20,581,608	18,874,060	11,035,564	(7,838,496)
Supplies and materials (26.0).....	105,266	105,266	122,400	17,134
Total Non-Pay Costs.....	21,060,560	19,356,902	11,522,164	(7,834,739)
Total Salary and Expense.....	67,473,761	67,913,894	50,491,000	(17,422,985)
Direct FTE.....	257	273	238	(35)

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

^{2/} Does not include mandatory financing from the PCORTF. Includes reimbursable FTEs.

NATIONAL INSTITUTES OF HEALTH
National Institute for Research on Safety and Quality

Detail of Full Time Equivalents (FTE) ^{1/ 2/}

	2019 Actual Civilian	2019 Actual Military	2019 Actual Total	2020 Est. Civilian	2020 Est. Military	2020 Est. Total	2021 Est. Civilian	2021 Est. Military	2021 Est. Total
Office of the Director (OD)									
Direct:.....	8	0	8	10	0	10	6	0	6
Reimbursable:.....	0	0	0	0	0	0	0	0	0
Total:.....	8	0	8	10	0	10	6	0	6
Office of Management Services (OMS)									
Direct:.....	57	0	57	60	0	60	57	0	57
Reimbursable:.....	0	0	0	0	0	0	0	0	0
Total:.....	57	0	57	60	0	60	57	0	57
Office of Extramural Research, Education, and Priority Populations (OEREP)									
Direct:.....	31	2	33	33	2	35	31	2	33
Reimbursable:.....	1	0	1	1	0	1	1	0	1
Total:.....	32	2	34	34	2	36	32	2	34
Center for Evidence and Practice Improvement (CEPI)									
Direct:.....	47	1	48	52	1	53	40	0	40
Reimbursable:.....	0	0	0	0	0	0	0	0	0
Total:.....	47	1	48	52	1	53	40	0	40
Center for Financing, Access, and Cost Trends (CFACT)									
Direct:.....	52	0	52	53	0	53	53	0	53
Reimbursable:.....	0	0	0	0	0	0	0	0	0
Total:.....	52	0	52	53	0	53	53	0	53
Center for Quality Improvement and Patient Safety (CQuIPS)									
Direct:.....	29	2	31	32	2	34	32	2	34
Reimbursable:.....	0	0	0	0	0	0	0	0	0
Total:.....	29	2	31	32	2	34	32	2	34
Office of Communications (OC)									
Direct:.....	27	0	27	27	0	27	14	0	14
Reimbursable:.....	0	0	0	0	0	0	0	0	0
Total:.....	27	0	27	27	0	27	14	0	14
AHRQ FTETotal.....	252	5	257	268	5	273			
NIRSQ FTETotal.....							234	4	238
Average GS Grade									
FY 2017	13.1								
FY 2018	13.1								
FY 2019	13.1								
FY 2020	13.1								
FY 2021.....	13.1								

^{1/} Excludes mandatory PCORTF FTEs. Includes reimbursable FTEs.

^{2/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

NATIONAL INSTITUTES OF HEALTH
National Institute for Research on Safety and Quality

Detail of Positions ^{1/2/}

	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget
Executive level I	2	2	2
Executive level II.....	6	6	6
Executive level III			
Executive level IV.....			
Executive level V.....			
Subtotal Executive Level Positions.....	8	8	8
Total - Exec. Level Salaries	\$1,996,003	\$1,970,322	\$1,970,519
Total SES, AHRQ	3	4	
Total - ES Salary, AHRQ	\$712,431	\$841,952	
Total SES, NIRSQ			4
Total - ES Salary, NIRSQ			\$974,058
GS-15.....	59	63	40
GS-14.....	64	70	59
GS-13.....	63	68	47
GS-12.....	12	12	11
GS-11.....	9	10	8
GS-10.....			
GS-9.....	7	7	9
GS-8.....	1	1	
GS-7.....	1	1	2
GS-6.....	2	2	2
GS-5.....	1	1	1
GS-4.....			
GS-3.....			
GS-2.....			
GS-1.....			
Subtotal	219	235	179
Average GS grade, AHRQ.....	13.1	13.1	
Average GS salary, AHRQ.....	\$99,172	\$102,663	
Average GS grade, NIRSQ.....			13.1
Average GS salary, NIRSQ.....			\$102,663

^{1/} Excludes Special Experts, Services Fellows and Commissioned Officer positions. Also excludes positions financed using mandatory financing from the PCORTF.

^{2/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

NATIONAL INSTITUTES OF HEALTH
National Institute for Research on Safety and Quality
FTEs Funded by the Affordable Care Act ^{1/}
(Dollars in Thousands)

Program	Section	FY 2011			FY 2012			FY 2013			FY 2014			FY 2015			FY 2016		
		Total	FTEs	CEs	Total	FTEs	CEs	Total	FTEs	CEs	Total	FTEs	CEs	Total	FTEs	CEs	Total	FTEs	CEs
Prevention and Public Health Fund AHRQ Mandatory NIRSQ Mandatory	4002	\$384	0	0	\$ -	0	0	\$ -	0	0	\$ -	0	0	\$ -	0	0	\$ -	0	0
Patient-Centered Outcomes Research Trust Fund AHRQ Mandatory NIRSQ Mandatory	6301	\$ -	0	0	\$ 366	4	0	\$ 633	6	0	\$ 1,505	13	0	\$ 1,644	10	0	\$ 1,430	10	0

Program	Section	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021		
		Total	FTEs	CEs	Total	FTEs	CEs	Total	FTEs	CEs	Total	FTEs	CEs	Total	FTEs	CEs
Prevention and Public Health Fund AHRQ Mandatory NIRSQ Mandatory	4002	\$ -	0	0	\$ -	0	0	\$ -	0	0	\$ -	0	0	\$ -	0	0
Patient-Centered Outcomes Research Trust Fund AHRQ Mandatory NIRSQ Mandatory	6301	\$ 1,387	8	0	\$ 1,129	8	0	\$ 1,096	7	0	\$ 1,500	7	0	\$ 1,500	7	0

^{1/} For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

National Institute for Research on Safety and Quality FY 2020 Congressional Justification
 Programs Proposed for Elimination
Health Information Technology Research Portfolio

Authorizing Legislation: Title III and IX and Section 947(c) of the Public Health Service Act.

Budget Authority (BA)¹:

	FY 2019 Final	FY 2020 Enacted	FY 2021 President's Budget	FY 2021 +/- FY 2020
BA	\$16,444,000	\$16,500,000	\$0	-\$16,500,000

¹For this and all other tables, the FY 2019 and FY 2020 columns contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; and Other.

Program Description and Accomplishments

The purpose of the Health Information Technology (Health IT) portfolio is to rigorously show how health IT can improve the quality of American health care. The portfolio develops and synthesizes the best evidence on how health IT can improve the quality of American health care, disseminates that evidence, and develops evidence-based tools for the effective use of health IT. By identifying what works and developing resources and tools, the portfolio has played a key role in the Nation's drive to accelerate the use of safe, effective, patient-centered health IT innovations.

In FY 2019, the Health IT portfolio within AHRQ funded \$14.5 million in research grants to increase understanding of the ways health IT can improve health care quality and effectiveness. The portfolio published a [report](#) in 2019 containing recent research findings and impact. For example, researchers at Yale University demonstrated that giving physicians the clinical decision support tools necessary to support patient-provider communication could result in fewer CT scans ordered, higher physician trust, and higher patient knowledge in cases involving minor head injuries. Also, researchers at Columbia University showed that mobile health technologies can decrease HIV-related symptoms in medically underserved populations. These and additional research exemplars are discussed in more detail in the report, which contains an [executive summary](#).

In addition, \$2.0 million in contract funds were used to support the synthesis and dissemination of health IT evidence. At the FY 2020 Enacted level, the Health IT portfolio continues total funding of \$16.5 million. The portfolio will be managed in FY 2020 by the newly named Division of Digital Healthcare Research to better reflect the ever evolving digital healthcare ecosystem that continues to expand beyond traditional health IT.

Funding History within AHRQ

Fiscal Year	Amount
FY 2017:	\$16,500,000
FY 2018:	\$16,500,000
FY 2019 Final:	\$16,444,000
FY 2020 Enacted:	\$16,500,000
FY 2021 President's Budget:	\$0

Budget Request

The FY 2021 President's Budget does not consolidate this activity of AHRQ's in NIH. The FY 2020 Budget Request is \$0.0 million, a decrease of \$16.5 million from AHRQ's FY 2020 Enacted level. The goal of the reorganization is to focus resources on the highest priority research, reorganize federal activities in a more effective manner, and provide increased coordination on health services research activities and patient safety. The FY 2021 President's Budget ends dedicated funding for health IT. Instead, health IT research will compete for funding opportunities within patient safety and health services research to ensure the highest priority research is funded.

Physicians' Comparability Allowance (PCA)

1) Department and component:

Agency for Healthcare Research and Quality/National Institute for Research on Safety and Quality ^{1/}

2) Explain the recruitment and retention problem(s) justifying the need for the PCA pay authority.

Most, if not all, of the research positions at AHRQ are in occupations that are in great demand, commanding competitive salaries in an extremely competitive hiring environment. This includes the 602 (Physician) series which is critical to advancing AHRQ's mission to produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable. Since the Agency has not utilized other mechanisms for the 602 series (for example, Title 38), it is imperative that the Agency offers PCAs to recruit and retain physicians at AHRQ. In the absence of PCA, the Agency would be unable to compete with other Federal entities within HHS and other sectors of the Federal government which offer supplemental compensation (in addition to base pay) to individuals in the 602 series.

3-4) Please complete the table below with details of the PCA agreement for the following years:

	AHRQ 2019 Final	AHRQ FY 2020 Enacted	NIRSQ FY 2021 President's Budget
3a) Number of Physicians Receiving PCAs	17	17	16
3b) Number of Physicians with One-Year PCA Agreements	0	0	0
3c) Number of Physicians with Multi-Year PCA Agreements	17	17	16
4a) Average Annual PCA Physician Pay (without PCA payment)	134,605	134,605	104,605
4b) Average Annual PCA Payment	\$24,765	\$24,765	23,895

^{1/} For this and all other tables, the FY 2019 and FY 2020 column contain information for the Agency for Healthcare Research and Quality and are provided for convenience and transparency. The FY 2021 President's Budget consolidates AHRQ's activities into NIH, and the FY 2021 column represents the request for the National Institute for Research on Safety and Quality.

5) Explain the degree to which recruitment and retention problems were alleviated in your agency through the use of PCAs in the prior fiscal year.

(Please include any staffing data to support your explanation, such as number and duration of unfilled positions and number of accessions and separations per fiscal year.)

PCA contracts are used as a tool to alleviate recruitment problems and attract top private sector physicians into public sector positions. These recruitments give the Agency a well-rounded and highly knowledgeable staff.

6) Provide any additional information that may be useful in planning PCA staffing levels and amounts in your agency.

SIGNIFICANT ITEMS FOR AHRQ IN THE HOUSE, SENATE, AND CONFERENCE REPORTS

FY 2020 SENATE REPORT 116-000

Diabetes

1. SENATE (Rept. 116-000)

The Committee is concerned about the significant costs associated with providing care for individuals that suffer from diabetes, including those from medically underserved low health literacy populations. The Committee encourages AHRQ to consider a pilot or demonstration program to support safety net clinics in increasing health literacy and preventing diabetes with the goal of reducing long-term costs

Action Taken or to be Taken:

Serving populations with limited health literacy requires primary care providers to make information about preventing and managing diabetes easier to understand and act on and to provide additional support. AHRQ will issue a special emphasis notice to encourage submission of grant applications to scale and spread effective approaches in primary care to address health literacy to improve chronic disease prevention and management, including diabetes.

Malnutrition

2. SENATE (Rept. 116-000)

The Committee requests that AHRQ convene a technical expert panel charged with creating a malnutrition-related readmissions quality measure that would help assign accountability for the prevention of malnutrition in hospitals

Action Taken or to be Taken:

In FY 2020, AHRQ will commission a systematic evidence review on the association of malnutrition with health outcomes in inpatient settings and the effectiveness of interventions to address malnutrition, including screening, in inpatient settings. When the report is completed, AHRQ will convene a technical expert panel that will use the report to make recommendations on filling research gaps in the field and the development of quality measures as appropriate. The panel will likely be asked to place particular emphasis on the needs of older, frail adults.

State Primary Care Demonstration

3. SENATE (Rept. 116-000)

The Committee understands that a number of States are taking steps to improve the delivery of primary care in their respective States. The Committee believes that these State level actions could provide a model for improving primary care nationally. The Committee recommendation includes \$2,000,000 to support a study of those States that have taken action aimed at improving the delivery of primary care and share the study's results with the Committee.

Action Taken or to be Taken:

In FY 2020, AHRQ will commission a study of state policy innovations to improve the delivery of primary care which will include a focus on primary care financing efforts.

SIGNIFICANT ITEMS IN THE HOUSE, SENATE, AND CONFERENCE REPORTS

FY 2020 HOUSE REPORT 116-62

EvidenceNow

1. HOUSE (Rept. 116-62)

The Committee supports the work of AHRQ to better serve the health needs of rural and underserved minorities through such programs as the Evidence Now network. The Committee encourages AHRQ to expand its efforts to include additional health extension program sites connected to public academic health centers in States with high populations of ethnically underserved minorities, rural communities, and tribal populations.

Action Taken or to be Taken

Early in 2020, AHRQ will publish a funding opportunity announcement that builds upon learnings from EvidenceNOW. AHRQ is particularly interested in applications from States with the highest cardiovascular disease (CVD) burden—often States with high populations of underserved minorities and rural communities. The initiative will disseminate and implement patient-centered outcomes research (PCOR) on clinical and organizational findings into primary care practices to improve healthcare quality with a focus on cardiovascular care. The initiative will accomplish this goal by catalyzing the development of a sustainable, State-based external primary care quality improvement (QI) support infrastructure to expand the State's current and future capacity to disseminate and implement PCOR evidence into primary care practice.

Kratom

2. HOUSE (Rept. 116-62)

The Committee notes that little research has been done to date on natural products that are used by many to treat pain in place of opioids. These natural plants and substances include kratom and cannabidiol (CBD). Given the wide availability and increased use of these substances, it is imperative to know more about potential risks or benefits, and whether or not they can have a role in finding new and effective non-opioid methods to treat pain. The Committee recommends an additional \$3,000,000 for this research and directs AHRQ to make center-based grants to address research which will lead to clinical trials in geographic regions which are among the hardest hit by the opioid crisis.

Action Taken or to be Taken

In FY 2020, AHRQ will begin a new systematic evidence review process, that will include ongoing monitoring and updating, that will assess the published evidence on the effectiveness of plant and plant-based substances for the treatment of pain including kratom and cannabinoids. This synthesized evidence may be the basis for the research community to propose innovative research efforts.

Prior Authorizations

3. HOUSE (Rept. 116-62)

The Committee is concerned about the potential adverse impacts the prior authorization process has on patient health outcomes. The Committee includes no less than \$500,000 for research that examines whether and to what extent delays in treatment due to prior authorization negatively impact patient outcomes.

Action Taken or to be Taken

AHRQ appreciates the Committee's interest in the effects of prior authorization on patient health outcomes. The Agency's existing data resources contain information on health insurance related barriers to care and patient satisfaction with care and AHRQ will explore the use of these resources to address this issue.

SIGNIFICANT ITEMS IN THE HOUSE, SENATE, AND CONFERENCE REPORTS

Consolidated Appropriations Act, 2020

Diabetes

1. Explanatory Statement (p.98)

AHRQ is encouraged to consider a pilot or demonstration program to support safety net clinics in increasing health literacy and preventing diabetes with the goal of reducing long-term costs.

Action Taken or to be Taken

Serving populations with limited health literacy requires primary care providers to make information about preventing and managing diabetes easier to understand and act on and to provide additional support. AHRQ will issue a special emphasis notice to encourage submission of grant applications to scale and spread effective approaches in primary care to address health literacy to improve chronic disease prevention and management, including diabetes.

Malnutrition

2. Explanatory Statement (p.99)

AHRQ is requested to convene a technical expert panel charged with creating a malnutrition-related readmissions quality measure to help prevent malnutrition in hospitals.

Action Taken or to be Taken:

In FY 2020, AHRQ will commission a systematic evidence review on the association of malnutrition with health outcomes in inpatient settings and the effectiveness of interventions to address malnutrition, including screening, in inpatient settings. When the report is completed, AHRQ will convene a technical expert panel that will use the report to make recommendations on filling research gaps in the field and the development of quality measures as appropriate. The panel will likely be asked to place particular emphasis on the needs of older, frail adults.

State Primary Care Demonstrations

3. Explanatory Statement (p. 99)

Congress understands that a number of States are taking steps to improve the delivery of primary care. Congress believes that these actions could provide a model for primary care nationally. The agreement includes no less than \$1,000,000 to support a study of those States' actions, to be shared with the Committees.

Action Taken or to be Taken:

In FY 2020, AHRQ will commission a study of state policy innovations to improve the delivery of primary care which will include a focus on primary care financing efforts.

Diagnostic Errors

4. Explanatory Statement (p. 99)

The agreement includes no less than \$3,000,000 for the Partners Enabling Diagnostic Excellence research program. Such grants will help establish the incidence of and understanding of factors contributing to diagnostic errors and examine the association between diagnostic safety and quality and outcomes such as patient harms, costs, expenditures, and utilization.

Action Taken or to be Taken:

AHRQ appreciates the Committee's continued support for the Agency's work supporting research to better understand diagnostic errors and help determine ways to limit the number of errors to make care safer for patients. Given the Committee's continued interest in this area, AHRQ has issued a Special Emphasis Notice (SEN) on December 27, 2019 to inform the research community about AHRQ's continued interest and priority in improving diagnostic safety.

The purpose of the SEN is to notify potential researchers that AHRQ's intent is to fund additional grants that will help establish the incidence of diagnostic errors, understand the contributing factors for those errors for unique clinical conditions and health care settings, and understand the association between diagnostic errors and outcomes (e.g., adverse events, cost, and utilization).

Kratom

5. Explanatory Statement (p. 99)

Little research has been done to date on natural products that are used by many to treat pain in place of opioids. These natural plants and substances include kratom and cannabidiol. The agreement recommends no less than \$1,000,000 for this research and directs AHRQ to make center-based grants. Such research should lead to clinical trials in geographic regions which are among the hardest hit by the opioid crisis.

Action Taken or to be Taken:

In FY 2020, AHRQ will begin a new systematic evidence review process, that will include on-going monitoring and updating, that will assess the published evidence on the effectiveness of plant and plant-based substances for the treatment of pain including kratom and cannabinoids. This synthesized evidence may be the basis for the research community to propose innovative research efforts.