CMS Update Sepsis and Antibiotic Stewardship



Robert Furno MD, MPH, MBA FACEP

Chief Medical Officer, Region V
Centers for Medicare and Medicaid Services





Disclaimer

I have no actual or potential conflict of interest in relation to this program or presentation.

This presentation was prepared as a tool to assist providers and is not intended to grant rights or impose obligations. Although every reasonable effort has been made to assure the accuracy of the information within these pages, the ultimate responsibility for the correct submission of claims and response to any remittance advice lies with the provider of services.

This publication is a general summary that explains certain aspects of the Medicare Program, but is not a legal document. The official Medicare Program provisions are contained in the relevant laws, regulations, and rulings. Medicare policy changes frequently, and links to the source documents have been provided within the document for your reference

The Centers for Medicare & Medicaid Services (CMS) employees, agents, and staff make no representation, warranty, or guarantee that this compilation of Medicare information is error-free and will bear no responsibility or liability for the results or consequences of the use of this guide.



Objectives

Overview of CMS Priorities

- Shifting from Volume to Value-Based payments
- Program alignment and streamlining

Key focus on Patient Safety

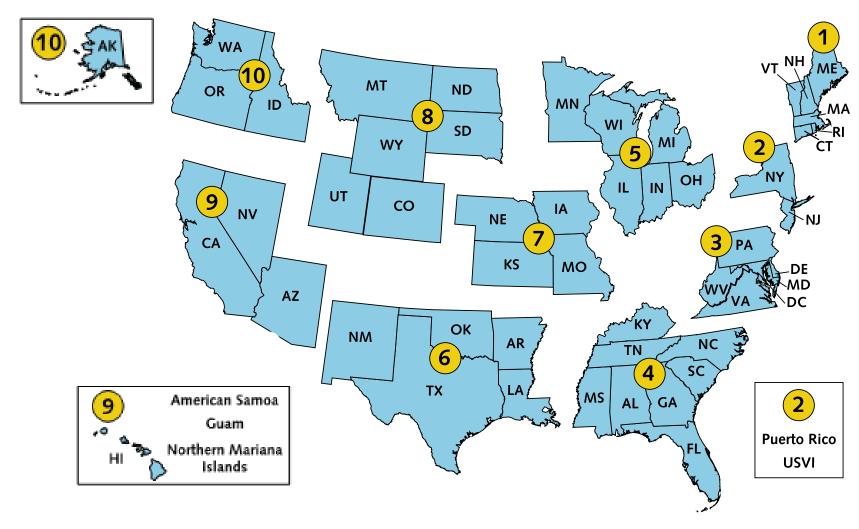
- Early diagnosis and treatment of sepsis
- SEP-1 and Antibiotic stewardship
- Special Innovation Projects and Best Practices

The Link to Health System Transformation

- MACRA and The Quality Payment Program
- Key elements that focus on sepsis and stewardship



CMS OFFICES





Better Care, Smarter Spending, Healthier People

Focus Areas

Description

Incentives

- Promote value-based payment systems
 - Test new alternative payment models
 - Increase linkage of Medicaid, Medicare FFS, and other payments to value
- Bring proven payment models to scale

Care Delivery

- Encourage the integration and coordination of services
- Improve population health
- Promote patient engagement through shared decision making

Information

- Create transparency on cost and quality information
- Bring electronic health information to the point of care for meaningful use

The CMS Innovation Center

Focus Areas

Pay

Providers

Test and expand alternative payment models

Accountable Care

- Pioneer ACO Model
- Medicare Shared Savings Program (housed in Center for Medicare)
- Advance Payment ACO Model
- Comprehensive ERSD Care Initiative
- Next Generation ACO

Primary Care Transformation

- Comprehensive Primary Care Initiative (CPC)
- Multi-Payer Advanced Primary Care Practice (MAPCP)
 Demonstration
- Federally Qualified Health Center (FQHC) Advanced
 Primary Care Practice Demonstration
- Independence at Home Demonstration
- Graduate Nurse Education Demonstration
- Home Health Value Based Purchasing (proposed)

Bundled payment models

- Bundled Payment for Care Improvement Models 1-4
- Oncology Care Model
- Comprehensive Care for Joint Replacement (proposed)

Initiatives Focused on the Medicaid population

- Medicaid Emergency Psychiatric Demonstration
- Medicaid Incentives for Prevention of Chronic Diseases
- Strong Start Initiative
- Medicaid Innovation Accelerator Program

Dual Eligible (Medicare-Medicaid Enrollees)

- Financial Alignment Initiative
- Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents

Other

- Medicare Care Choices
- Medicare Advantage Value-Based Insurance Design model

Deliver Care

Support providers and states to improve the delivery of care

Learning and Diffusion

- Partnership for Patients
- Transforming Clinical Practice
- Community-Based Care Transitions
- Health Care Innovation Awards

State Innovation Models Initiative

- SIM Round 1
- SIM Round 2
- Maryland All-Payer Model
- Million Hearts Cardiovascular Risk Reduction Model

Distribute Information

Increase information available for effective informed decision-making by consumers and providers

Information to providers in CMMI models

Shared decision-making required by many models



Why focus on Sepsis?

- An increasingly common cause of mortality
 - Between 1999 and 2014, the annual number of all reported sepsisrelated deaths (primary and secondary diagnoses combined) increased 31 percent, from 139,086 in 1999 → 182,242 in 2014
 - Data reveal that the sepsis mortality rate is more than eight times higher than mortality rates among patients admitted for other conditions
- Most expensive condition treated in U.S. hospitals
 - Costs associated with the treatment of sepsis alone aggregated to \$20.3 billion, or approximately 5.2 percent of the total cost of all hospitalizations in the country

Torio CM, and Roxanne Andrews M. National Inpatient Hospital Costs: The Most Expensive Conditions by Payer, 2011. AHRQ - HCUP, Aug. 2013. Web. Aug. 2016. Available at https://www.hcup-us.ahrq.gov/reports/statbriefs/sb160.jsp. Accessed August 2016

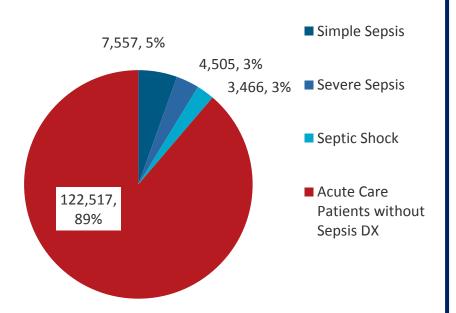
HCUP Fast Stats. Healthcare Cost and Utilization Project (HCUP). Rockville, MD: Agency for Healthcare Research and Quality, July 7, 2016. Available at <a href="https://www.hcup-us.ahrq.gov/faststats/national/inpatientcommondiagnoses.jsp?year1=2013&characteristic1=0&included1=1&year2=&characteristic2=0&included2=1&expansionInfoState=hide&dataTablesState=hide&definitionsState=hide&exportState=hide. Accessed September 2016.

Elixhauser A, Friedman B, Stranges E. Septicemia in U.S. Hospitals, 2009. Rep. AHRQ - HCUP, Oct. 2011. Available at http://www.hcup-us.ahrq.gov/reports/statbriefs/sb122.pdf. Accessed August 2016.

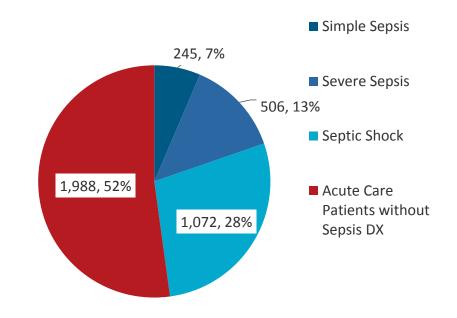


Sepsis is the #1 Cause of Inpatient Deaths

2014 Acute Care Discharges 11% of Patients Have Sepsis DX



2014 Acute Care Deaths 48% of Patients Have Sepsis DX





Opportunities for intervention

- Reduction in mortality rates have been achieved by implementing a bundle of interventions that address the process of care for sepsis.
 - Severe Sepsis and Septic Shock: Management Bundle (Henry Ford Hospital and the Society of Critical Care Medicine, the Infectious Diseases Society of America, and emergency physicians)
 - Creation of the Surviving Sepsis Campaign to revise the measure's specifications on the basis of recently released studies
 - NQF endorsed in 2008
 - CMS adopted this composite measure for the Hospital Inpatient Quality Reporting Program (IQR) and hospitals began submitting measure data beginning with October 1, 2015 discharges



ProCESS Investigators, Yealy DM, Kellum JA, Juang DT, et al. A randomized trial of protocol-based care for early septic shock. N Engl J Med 2014; 370(18):1683-1693.

The ARISE Investigators and the ANZICS Clinical Trials Group. Goal-directed resuscitation for patients with early septic shock. N Engl J Med 2014; 371:1496-1506.

Mouncey PR, Osborn TM, Power GS, et al. for the ProMISe trial investigators. Trial of early, goal-directed resuscitation for septic shock. N Engl J Med 2015. doi:10.1056/NEJMoa1500896.

Levy MM, Rhodes A, Phillips GS, et al. Surviving Sepsis Campaign: Association Between

Performance Metrics and Outcomes in a 7.5-Year Study. Crit Care Med 2015;43:3-12.

SEP-1 Bundle

- The Centers for Medicare & Medicaid Services (CMS) has incorporated a composite measure for assessing the degree to which sepsis care in hospitals meets recommended guidelines.
 - Evaluates the processes associated with high quality care for patients with severe sepsis and septic shock
 - Facilitates the "efficient, effective, and timely delivery of high quality sepsis care in support of the Institute of Medicine's aims for quality improvement."
 - Aims to lower complication and mortality rates while making sepsis care more affordable by focusing on early intervention, which leads to the use of fewer resources



SEP-1

To be completed within **three hours** of time of presentation*:

- Measure lactate level
- Obtain blood cultures prior to administration of antibiotics
- 3. Administer broad spectrum antibiotics
- Administer 30ml/kg crystalloid for hypotension or lactate ≥ 4mmol/L

^{* &}quot;Time of presentation" is defined as the time of earliest chart annotation consistent with all elements of severe sepsis or septic shock ascertained through chart review.



SEP-1

To be completed within **six hours** of time of presentation*:

- Administer vasopressors (for hypotension that does not respond to initial fluid resuscitation) to maintain a mean arterial pressure (MAP) ≥ 65mmHg
- 2. In the event of persistent hypotension after initial fluid administration (MAP < 65 mm Hg) or if initial lactate was ≥ 4 mmol/L, re-assess volume status and tissue perfusion and document findings according to Table 1
- 3. Re-measure lactate if initial lactate elevated

^{* &}quot;Time of presentation" is defined as the time of earliest chart annotation consistent with all elements of severe sepsis or septic shock ascertained through chart review.



SEP-1: Completing The Bundles

Required Action	Severe	Sepsis	Septic Shock				
	Three Hour Bundle	Six Hour Bundle	Three Hour Bundle	Six Hour Bundle			
Initial Lactate Collection	Yes	Must be completed within three hours of Severe Sepsis Presentation					
Blood Culture Collection	Yes						
Initial Antibiotic Started	Yes						
Repeat Lactate Collection (if Initial Lactate greater than 2)	Υ	es	Must be completed within six hours of Severe Sepsis presentation				
30mL/kg Crystalloid Fluids Started	N/A	N/A	Yes	Must be completed within three hours of Septic Shock			
Vasopressor Given (if decreasing BP persists)	N/A	N/A	Must be completed within six hours of	Yes			
Repeat Volume Status/ Tissue Perfusion Assessment	N/A	N/A	Septic Shock	Yes			



Takeaways

- SEP-1 measure refinement is an ongoing and iterative process
- The process involves engaging with multiple stakeholders
- Refinement is driven by these goals:
 - Maximizing beneficiary sepsis care
 - Minimizing clinician documentation burden
 - Minimizing hospital abstraction burden
 - Performance is poised for improvements in future analyses (v5.2) on feedback effective January 1, 2017



The other side of the coin: Antibiotic Stewardship

- Update to SEP-1
 - Specifications changed in v5.2 → allow cases with known culture results and known sensitivities to use *targeted antibiotic choice*

Hospital XXX <u>Antibiogram</u>												
	% of n isolates susceptible to each antibiotic listed											
Bacteria	Number of isolates tested (n)	TOB	CFP	CTZ	PTZ	IMI	CIP	OXA	VAN	DAP		
E. cloacae	192	65	77	66	79	96	85					
E. coli	1462	86	94	90	90	99	65					
K. pneumoniae	379*	78	80	79	86	97	81					
A. baumannii	117	63	61	57	69	73	66					
P. aeruginosa	928	65	73	71	88	76	44					
S. aureus	1178						44	41	100¥	100		
E. faecalis	572								99	100		
E. <u>faecium</u>	206								43	96		

^{*20%} of isolates are ESBL-positive

Example adapted from Utilization of the Antibiogram in Clinical Practice accessed at

http://www.bugsvsdrugs.com

- Alignment with other reimbursement policy
 - Quality PaymentProgram
 - Improvement Activity related to promoting antibiotic stewardship programs

^{*23%} of isolates have vancomycin MIC = 2mcg/mL

TOB = tobramycin; CFP = <u>cefepime</u>; CTZ = ceftazidime; PTZ = piperacillin/<u>tazobactam</u>; IMI = imipenem;

CIP = ciprofloxacin; OXA = oxacillin; VAN = vancomycin; DAP = daptomycin

QIN/QIO efforts on Stewardship: Telligen

- Combating Antibiotic Resistant Bacteria through Antibiotic Stewardship in Communities → Key components:
 - Develop a multidisciplinary advisory team with expertise in the topic area
 - Increase the number of outpatient facilities with AS programs
 - Educate recruited outpatient settings including healthcare leadership and patients on the fundamentals of antimicrobial stewardship and the risks of misuse/overuse of antibiotics
 - Build and sustain robust partnerships to promote and educate the community about antibiotic stewardship
 - By the end of the scope of work, 80% of recruited settings will have implemented the Core Elements for Antibiotic Stewardship → will **potentially** represent 32% of Medicare FFS beneficiaries benefiting from implementation of this initiative.

Best Practice Resource: www.survivingsepsis.org









ABOUT SSC ♥

GUIDELINES

BUNDLES

DATA COLLECTION

RESOURCES

▼

IMPLEMENT/IMPROVE ♥

CONTACT









Congress Session Addresses Antibiotic Stewardship in Sepsis

A session during the 46th Critical Care Congress addressed balancing early antibiotic administration and stewardship in sepsis. Learn more and access related materials here.



Statement on Maternal Sepsis

SCCM has endorsed a Statement on Maternal Sepsis released by the World Health Organization.



Updated Surviving Sepsis Campaign Guidelines

A consensus committee of 55 international experts in sepsis has updated recommendations to help guide clinicians caring for their adult patients with sepsis and septic shock.



SSC Listserv

The Campaign's listsery provides an active forum for professionals to share experiences and ask questions. Join SSC Listsery



Patients and Families

MyICUCare.org and the THRIVE Initiative offer resources, including information on post-intensive care syndrome.

Additional resources







Campaign Screening Tool Sample

The Surviving Sepsis Campaign provides a paper screening tool to assist when evaluating patients in the medical/surgical/telemetry wards, or in the ICU.

Community Resources

Severe Sepsis/Septic Shock Progress Note - Cookeville Regional Medical Center

Severe Sepsis/Septic Shock Clinical Pathway - Cookeville Regional Medical Center

Pediatric Initial Sepsis Response Plan - Wesley Children's Hospital

Sepsis Screen Flowchart - Wesley Children's Hospital

Sepsis Alert Checklist - Wesley Healthcare

Adult Sepsis Management Pathway - St. Helens and Knowsley Hospitals

ICU Severe Sepsis Screening Tool - Saint Joseph Mercy Health System

Patient Units Severe Sepsis Screening Tool - Saint Joseph Mercy Health System

Sepsis Pocket Card - Saint Joseph Mercy Health System

Sepsis Recognition and Treatment Protocols - Stony Brook

Sepsis Pediatric Order Set - Stony Brook

Pediatric ICU Screening Tool - Stony Brook

Perinatal Screening Tool - Dignity Health



The Quality Payment Program

The Quality Payment Program policy will:

- Reform Medicare Part B payments for more than 600,000 clinicians
- Improve care across the entire health care delivery system



Clinicians have two tracks to choose from:



The Merit-based Incentive Payment System (MIPS)

If you decide to participate in traditional Medicare, you may earn a performance-based payment adjustment through MIPS.



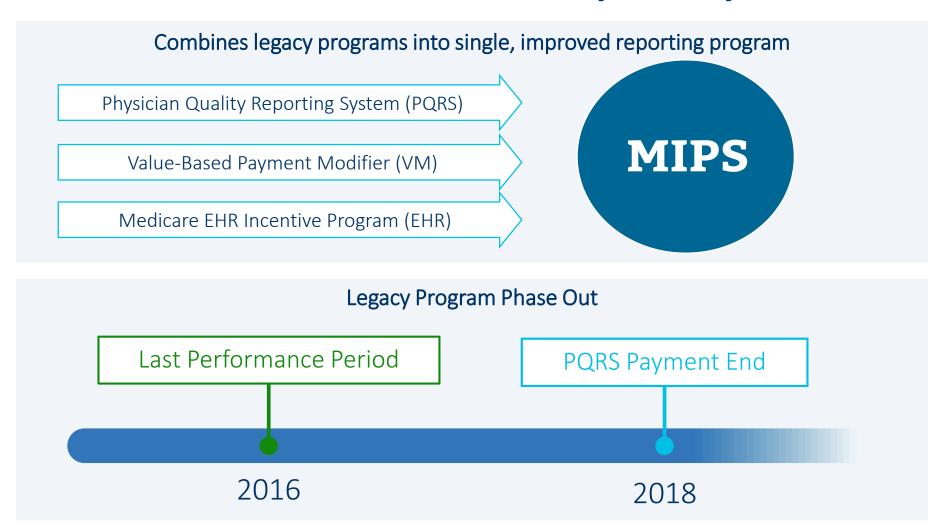


Advanced Alternative Payment Models (APMs)

If you decide to take part in an Advanced APM, you may earn a Medicare incentive payment for participating in an innovative payment model.



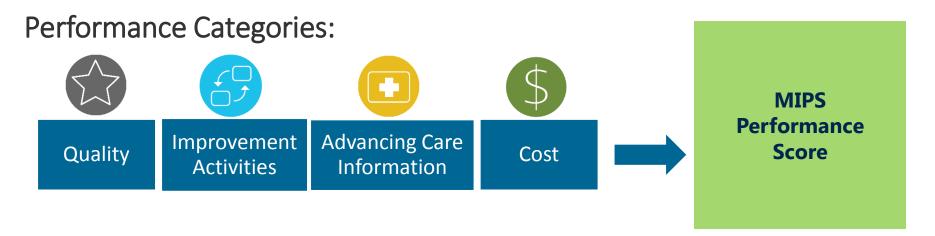
What is the Merit-based Incentive Payment System?





What Is MIPS?

https://qpp.cms.gov



- Reporting standards align with Alternative Payment Models when possible
- Many measures align with those being used by private insurers

Clinicians will be reimbursed under Medicare Part B based on this Performance Score

Pick Your Pace for Participation for the Transition Year

Participate in an Advanced Alternative Payment Model



 Some practices may choose to participate in an Advanced Alternative Payment Model in 2017

Test



Submit Something

- Submit some data after January 1, 2017
- Neutral payment adjustment

MIPS

Partial Year



Submit a Partial Year

- Report for 90-day period after January 1, 2017
- Neutral or positive payment adjustment

Full Year



Submit a Full Year

- Fully participate starting January 1, 2017
- Positive payment adjustment

Note: Clinicians do not need to tell CMS which option they intend to pursue.

Not participating in the Quality Payment Program for the Transition Year will result in a negative 4% payment adjustment.



Part III: Checklist for Preparing and Participating in MIPS





Preparing and Participating in MIPS: A Checklist

- □ Determine your eligibility and understand the requirements.
- Choose whether you want to submit data as an individual or as a part of a group.
- Choose your submission method and verify its capabilities.
- □ Verify your EHR vendor or registry's capabilities before your chosen reporting period.
- □ Prepare to participate by reviewing practice readiness, ability to report, and the Pick Your Pace options.
- □ Choose your measures. Visit **qpp.cms.gov** for valuable resources on measure selection and remember to review your current billing codes and Quality Resource Use Report to help identify measures that best suit your practice.
- Verify the information you need to report successfully.
- □ Care for your patients and record the data.
- □ Submit your data by March 31, 2018.



Prepare to Participate

How Do I Do This?

- Consider your practice readiness.
 - Have you previously participated in a quality reporting program?
- 2. Evaluate your ability to report.
 - What is your data submission method?
 - Are you prepared to begin reporting data between January 1, 2018 and March 31, 2018?
- 3. Review the Pick Your Pace options for Transition Year 2017.
 - Test
 - Partial Year
 - Full Year



☐ Choose Your Measures/Activities

How Do I Do This?

- 1. Go to qpp.cms.gov.
- 2. Click on the Explore Measures tab at the top of the page.
- 3. Select the performance category of interest.

Quality Measures Advancing Care Information Improvement Activities

4. Review the individual Quality and Advancing Care Information measures as well as Improvement Activities.



Getting Started: MIPS Participation Look-Up Tool

You could also check your participation status by:

Using the MIPS Participation Look-up Tool on qpp.cms.gov.





Program Performance

Quality Measures

Advancing Care Informat

Program Performance

Quality Measures

Advancing Care Information

Improvement Activities

MIPS Overview

Use this tool to browse the different MIPS measures and activities.

Note: This tool is only for informational and estimation purposes. You can't use measures or activities.

Most participants: Report up to 6 qua for a minimum of 90 days. Groups using the web interface: Report up to 6 qua for a minimum of 90 days.

Most participants: Attest that you cominimum of 90 days.

Groups in APMs qualifying for speci-

Program Track 1 or the Oncology Ca

APM. You do not need to do anything

Groups with fewer than 15 participal professional shortage area: Attest the of 90 days.

Participants in certified patient-cen practices, or an APM designated as earn full credit.

Improvement Activities New category.

Replaces the Physician Quality

Reporting System (PQRS).

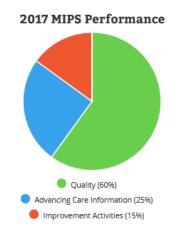
Quality Measures

Instructions

- 1. Review and select measures that best fit your practice.
- Add up to six measures from the list below, including one outcome measure. You can use the search and filters to help find the measures that meet your needs or specialty.
- If an outcome measure is not available that is applicable to your specialty or practice, choose another high priority measure.
- 4. Download a CSV file of the measures you have selected for your records.

Groups in APMs qualifying for special scoring standards under MIPS, such as Shared Savings Program Track 1 or the Oncology Care Model: Report quality measures through your APM. You do not need to do anything additional for the MIPS quality category.

Note: This tool is only for informational and estimation purposes. You can't use it to submit or attest to measures or activities.



Select Measures



Showing 271 Measures

Acute Otitis Externa (AOE): Systemic Antimicrobial Therapy - Avoidance of Inappropriate Use

Acute Otitis Externa (AOE): Topical Therapy

ADD

➤ ADHD: Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity
Disorder (ADHD) Medication

Selected Measures

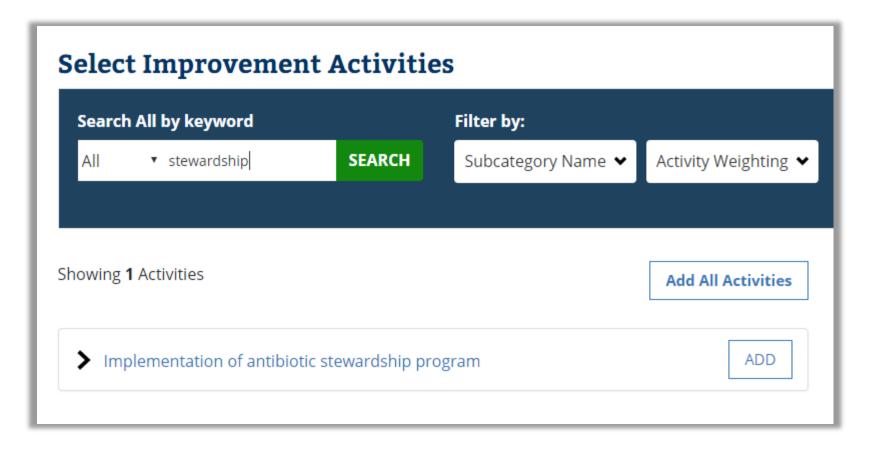
0 Measures Added

Once you select measures they will appear here



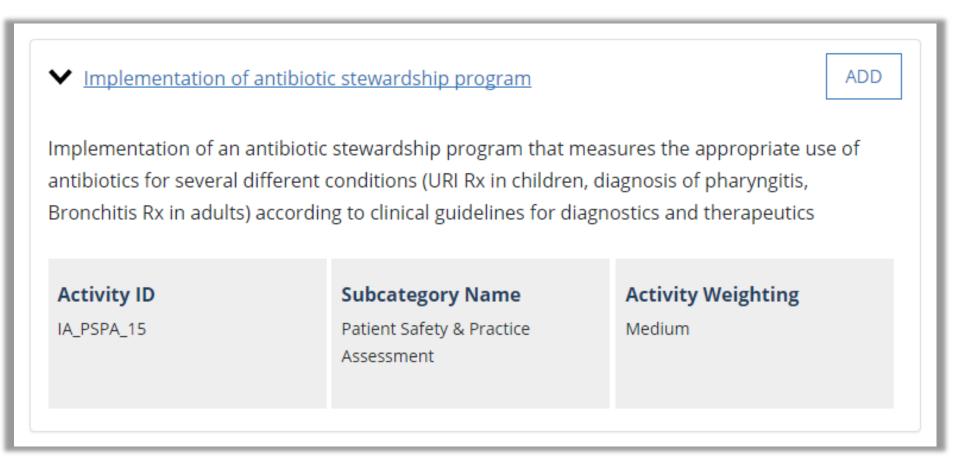
https://qpp.cms.gov

MIPS Improvement Activity related to Antibiotic Stewardship





MIPS Improvement Activity related to Antibiotic Stewardship





NEXT STEPS

Where can I go to get help?



Technical Support Available to Clinicians

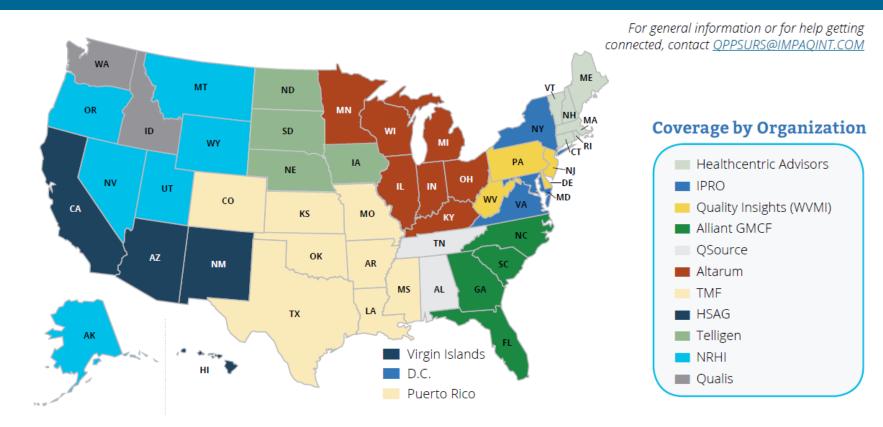
Integrated Technical Assistance Program

- Full-service, expert help
 - Quality Payment Program Service Center
 - Quality Innovation Network/Quality Improvement Organizations
 - Quality Payment Program Small, Underserved, and Rural Support
 - Transforming Clinical Practice Initiative
 - APM Learning Networks
- Self-service
 - QPP Online Portal

All support is FREE to clinicians



https://qpp.cms.gov/education



Additional Resources

Quality Payment Program:

<u>qpp.cms.gov</u> 1-866-288-8292 TTY: 1-877-715-6222 OPP@cms.hhs.gov

APM Learning Model Support List:

http://innovation.cms.gov

Transforming Clinical Practice Initiative (TCPI):

PTN Map: https://innovation.cms.gov/
initiatives/Transforming-Clinical-Practices
<a href="Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/Top-Initiatives/

Quality Improvement Organizations:

QIN-QIO Map: http://qioprogram.org/



Quality Payment Program: How to get help

Need Help

The Quality Payment Program Service Center is available to help.

1-866-288-8912

TTY: 1-877-715-6222

Available Monday-Friday; 8:00AM – 8:00PM Eastern Time

Questions

Send us your questions about the Quality Payment Program to

QPP@cms.hhs.gov





