IDSA
Infectious Diseases Society of America

VALUE-BASED ARRANGEMENTS GUIDE

Linking Merit to Compensation

CONTENTS

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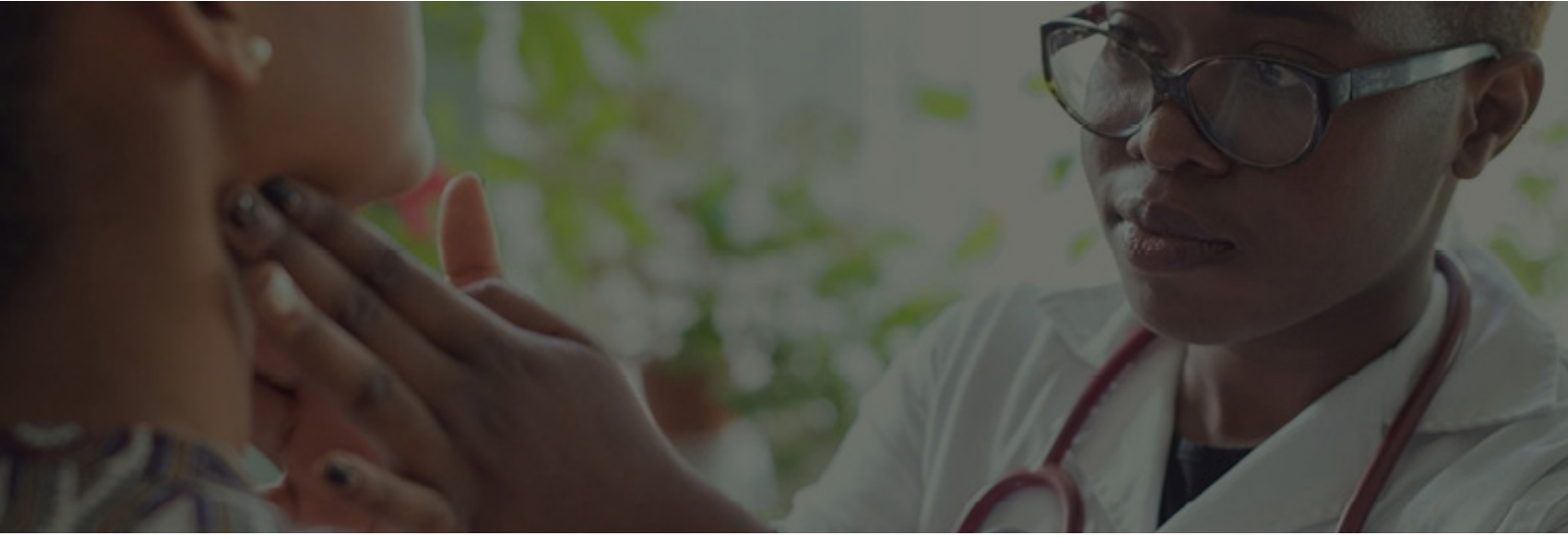

Background and Overview of the Value-Based Arrangements Guide

A. BACKGROUND

One approach for capturing the value infectious diseases physicians provide is by clearly attributing their activities to institution-wide quality of care and/or cost savings. Because ID physicians' scope of practice and administrative responsibilities can differ considerably by geography or practice type (i.e., academic, community or private practice), ID physicians need to be informed about current opportunities in which similarly situated peers are being recognized and, in some cases, compensated for contributing to good outcomes or reduced cost of care. This guide is designed to educate ID physicians about value-based reimbursement concepts and contracting approaches such that IDSA members have the background information needed to advocate for alternative compensation or reimbursement methodologies with their employers or hospital or academic medical center administrators.

The Value-Based Arrangements Guide is one of several resources developed as part of IDSA's Compensation Initiative, designed to improve ID physician compensation as a key component of IDSA's Strategic Plan.

B. OVERVIEW OF THE VBA GUIDE

This guide outlines the general approaches, strategies and materials to assist physicians in negotiating for compensation or reimbursement that is tied to value-based concepts. With easy-to-navigate links to the different sections of the guide, it provides ID physicians with practical information that can be implemented across a variety of practice settings, from baseline education about value-based concepts and programs to ID-applicable examples of where and how value-based compensation or reimbursement concepts can be adopted. Physicians will need to first understand the concepts of value-based care delivery and payment before considering initiating negotiations with administration or payers for new compensation or reimbursement terms.

This guide was developed under the leadership of IDSA's Compensation Task Force in partnership with ECG Consultants. To develop the playbook, IDSA and ECG undertook an intensive data-gathering process to better understand the current ID compensation landscape and determine the root causes of the consistent undervaluation of the profession. The following ID compensation survey data-based hypotheses have been developed to inform the guide:

- We believe the efforts of ID physicians result in quality improvements and actual cost savings for their partnering health systems, and it is possible to measure and recognize the impact of this effort. However, it can be challenging to attribute these quality improvements and cost savings to the efforts of individual ID physicians.

- We believe ID physicians should be recognized for the value they provide to the community through non-patient-facing and nontraditional clinical activities.

C. ACKNOWLEDGEMENTS

IDSA wishes to thank the following IDSA members who contributed time and expertise to the development of this guide:

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We also wish to acknowledge the ECG Consultants team for their contributions: Clark Bosslet, Stuart McClure, Amy Strauss and Jessica Reed.

D. WHAT IS VALUE-BASED CARE?

Value-based care is the intended catalyst for health care in the United States to transition from volume to value. On the surface, the concept seems rather simple. Rather than reward health care providers simply for seeing patients and performing procedures and diagnostics, health care providers should be rewarded for providing better care for individuals and populations at a lower cost. These were the five original value-based programs initiated by the Centers for Medicare & Medicaid Services and payers:

- End-Stage Renal Disease Quality Incentive Program;
- Hospital Value-Based Purchasing Program;
- Hospital Readmissions Reduction Program;
- Value Modifier Program (also called the Physician Value-Based Modifier);
- Hospital-Acquired Condition Reduction Program.

E. KEY CONSIDERATIONS

Historically, value-based care and value-related concepts have neither significantly moved the needle in negotiating reimbursement arrangements with health insurance payers nor resulted in significant shifts in care delivery. The emphasis on unit production has not provided systems with sufficient latitude to reward physicians for adopting different approaches for managing the health of a population — though this is shifting with the introduction of care coordination CPT® codes in the past few years. By contrast, utilization-focused metrics have been the primary concern within value-based contracts (i.e., screenings, immunizations and wellness visits). Many health systems believe that their portfolios contain insufficient revenue tied to value-based populations and are willing to consider innovative reimbursement arrangements, provided there is clear quality improvement and a promise of economic return.

Several dynamics exist in today's health care market that suggest value-based care models will continue to be key levers in transforming health care from volume to value. Among the most recent

drivers, the economic uncertainty of fee-for-service contract arrangements during the COVID-19 pandemic has resulted in significant financial pressures among hospitals, health systems and academic medical centers, as high-revenue-generating services such as elective surgeries have been deprioritized in favor of lower-revenue-generating services such as caring for patients with COVID-19. See figure 1 for additional details about current market forces indicating a continued transition toward value-based care models.

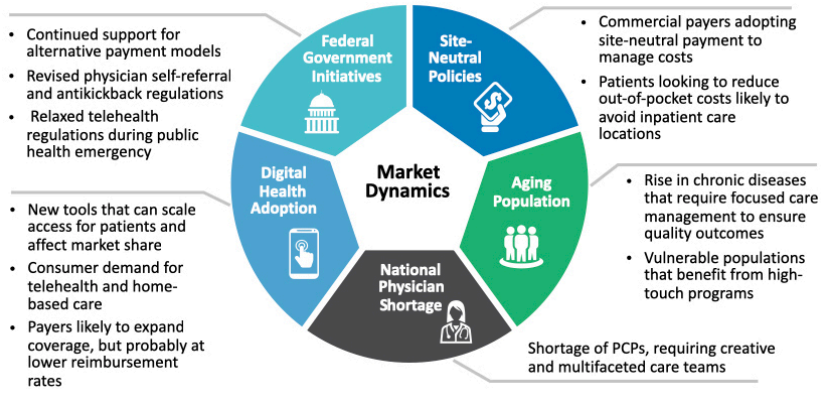

FIGURE 1: Value-Based Care Market Dynamics

F. METRICS AND COMPENSATION

ID physicians impact the quality of health care both at the patient and health care system level. However, there is a lack of relevant measures available to largely hospital-based cognitive specialists including ID physicians. Aside from HIV and hepatitis C virus quality measures, which are meaningful to only a small proportion of ID physicians in the outpatient setting who focus on these disease areas (as opposed to general ID), there are very few ID-specific measures on which ID physicians can report to avoid payment penalties. ID physicians are not "proceduralists," but rather nonproceduralists/cognitive physicians who provide most of their services using Evaluation & Management codes. Across all ID physicians in clinical practice, many E/M codes billed are for services provided in the inpatient setting (e.g., 82% of 2020 Medicare claims billed by ID physicians were at the facility place of service). The unique billing and practice patterns of ID physicians have made it challenging to develop additional quality measures that are feasible to report under value-based payment programs.

For more than a decade, IDSA has dedicated efforts to develop ID-relevant clinical quality measures, such as the 72-Hour Review of Antibiotic Therapy for Sepsis, Appropriate Use of Anti-MRSA Antibiotics and Appropriate Treatment of Initial *Clostridium difficile* Infection, to help fill this gap but has consistently been rejected by CMS when the measures were submitted for the Annual Call for Measures.

Nonetheless, there is an opportunity to develop new measures with clear attribution to ID activities, if the metrics are aligned with the six domains of health care quality (AHRQ and IOM/NAS), as defined below:

- **Safe:** avoiding harm to patients from the care that is intended to help them;
- **Effective:** providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and misuse, respectively);
- **Patient centered:** providing care that is respectful of and responsive to individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions;
- **Timely:** reducing waits and sometimes harmful delays for both those who receive and those who give care;
- **Efficient:** avoiding waste, including waste of equipment, supplies, ideas and energy;
- **Equitable:** providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location and socioeconomic status.

G. GROUP AND INDIVIDUAL CONSIDERATIONS

ID physicians have a unique opportunity to be incentivized through a mixture of group and individual performance. These types of goals incorporate the inclusion of a mixture of rewarding for individual performance and rewarding for group performance. The group goals can span multiple specialties and patient modalities, truly incentivizing team-based behaviors. A combination of individual and group metrics should be incorporated in a robust value-based arrangement design.

From a group perspective, it is important to recognize team-based care approaches and subspecialization. Further, group goals mitigate internal competition and may be applied to both volume- and value-based incentives.

Individual metrics, alternatively, need to be aligned with individual effort, and typically a combination of quality and throughput types of performance. These metrics are most successful when the intention is to recognize individual contributions and emphasize personal control, mitigating the "free rider" effect.

For ID, there are two basic approaches for establishing a pathway toward participation in value-based reimbursement programs and concepts.

1. Development of ID-Specific Measures

To date, there are no broadly applicable value-based programs designed specifically to capture the value of ID physician activities. However, developing metrics may be possible for rare diseases or for care that is only managed by ID physicians. Outpatient parenteral antibiotic therapy, for example, is an area in which outcome measures have not been fully developed and would be easily attributable to ID physician activities. HIV, like OPAT, is ID specific and actually does have broadly accepted quality measures. Additionally, medication allergies, especially documentation and verification of antimicrobial allergies, can have a major impact on antimicrobial selection and institutional costs and can be ID specific.

2. Institutional or Group Measures

In contrast to ID-specific measures, there are several quality metrics and outcomes measures for which ID physician involvement tends to improve outcomes. Examples include CAUTI, CLABSI, sepsis and C. *difficile*. The challenge for ID physicians is convincing hospital and health system leaders that ID attribution to these measures is real and that improvement in these measures adds value to the institution. From there, innovative reimbursement and compensation models can be explored.

The IDSA Quality Improvement Committee conducted a preliminary analysis to identify the major programs and requirements among payers (CMS, private payers), consensus bodies (e.g., NQF) and certifying entities (i.e., Commission on Cancer, Joint Commission). Thirteen programs were identified that include quality measures related to ID, with the level of measurement occurring at the clinician, hospital and facility levels. Nine of these programs are administered by CMS, two by the Joint Commission, one by BlueCross BlueShield of North Carolina and one by United Healthcare.

TABLE 1: Quality Reporting Programs Relevant to ID

Steward	Level of Measurement	No. of Programs
The Centers for Medicare and Medicaid Services	Clinician	2
The Centers for Medicare and Medicaid Services	Hospital	7
The Joint Commission	Hospital	2
BlueCross BlueShield of North Carolina	Hospital	1
United Healthcare	Facility	1

Market and Practice Landscape

For all physicians, including ID physicians, to thrive in a value-based contract or quality-based compensation incentive, it is important to consider the market in which they operate and services they provide.

A. MARKET CONSIDERATIONS
These considerations include the size of the market in which a physician operates (i.e., number of beds covered and total population within the service area), local geography and competition (i.e., large metropolitan area with many ID physicians/practices versus small rural community with few ID physicians/practices).

B. PRACTICE CONSIDERATIONS
These considerations include the services being offered by an ID physician or practice. The list of potential services is long and variable depending on the market considerations but can range from comprehensive ID services (e.g., a physician or practice being responsible for all ID-related activities, clinical and administrative) to a single ID service (e.g., infection control, antimicrobial stewardship, COVID-19/special pathogens medical director).

C. SPECTRUM OF MEASURES OF QUALITY TO VALUE
After considering the market and practice dynamics for an ID physician or practice, the selection of the appropriate quality- or value-based metric becomes simpler yet still imperfect until ID-tailored metrics are developed.

The level of adoption for ID will vary by practice location and organizational progress in codifying metrics and goals across the spectrum of advancement within quality and value domains. Figure 2 provides a summary of this quality-to-value spectrum. On the left are quality measures that are considered introductory, and on the right are more complex population health measures. The adoption of quality- or value-based metrics is generally dependent on the convergence of organizational and/or payer appetite for contributing funding to a compensation or reimbursement program. Hospitals, health systems and academic medical centers often already have significant dollars at risk for performance in metrics in which ID physician activities are attributable.

As shown in figure 2, the spectrum of measures from quality to value generally follows a less-complex-to-more-complex progression based on the ability to measure the metric, attribute the improvement of the metric and create clear and defined baseline expectations. Importantly, it is a spectrum, and different organizations may be at different points in their respective progress toward value-based care and the development of metrics measured within the organization (moving from the left side of the table to the right side). Most metrics in figure 2 are appropriate for all ID settings (private practice, AMC and health system), but organizations tend to select only a few metrics to measure and track for a specialty. That said, employer type can be an initial indicator for where an organization might be in that evolution.

• Single-physician practices and private practice physicians tend to gravitate toward quality metrics on the left side of figure 2. The implementation of these metrics can be highly controlled and maintained in a smaller scope of practice with limited (if any) inpatient responsibilities. These metrics also typically have existed for long enough to ensure clear operational baseline expectations exist at the provider level.

• AMCs and physicians employed by AMCs tend to progress toward metrics with a moderate level of complexity and adoption (middle of the spectrum).

• Lastly, large integrated health systems have advanced the furthest, toward the most complex metrics that can be implemented at a large scale (toward the right side of the spectrum).

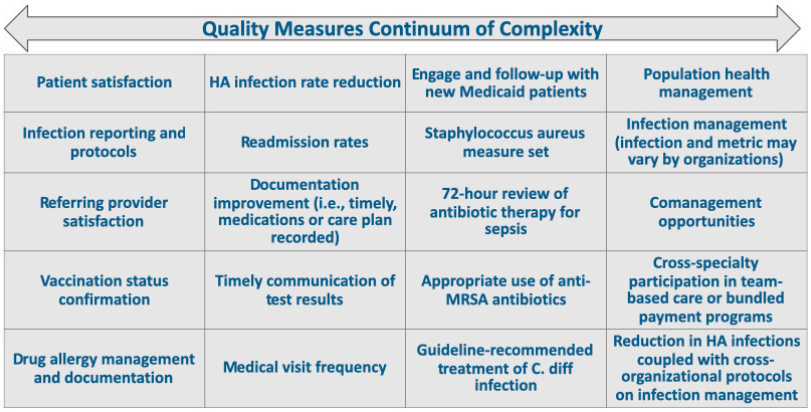

FIGURE 2: Spectrum of Measures, From Quality to Value

D. PAYMENT MODEL FOR QUALITY- OR VALUE-BASED METRICS

ID physicians who are not currently incentivized for performance in quality- or value-based metrics should negotiate for dollars to be tied to one to three metrics that align with their unique market and practice circumstances. To ensure success, clear baseline expectations should be set. There also needs to be a process to define achievement, and the amount of compensation or funding associated with performance should be meaningful enough for physicians to be properly incentivized.

Ideally, incentives should be structured as a pure bonus (5% to 20% of total historical cash compensation or the amount of compensation that was received in the previous year), meaning the original

components of compensation remain the same, and high performance in quality metrics results in incremental compensation. In negotiations, if decision-makers are amenable to a pure bonus structure, metric targets will likely need to be set so that achievement represents status quo performance or better.

Alternatively, incentives can be structured as both at risk and a bonus (again, 5% to 20% of total historic cash compensation), with status quo performance resulting in original compensation or higher.

E. METRICS FOR ID

1. Overview of Measures

Capturing ID physicians' efforts to improve the coordination of care and ensure the correct care pathways has been shown to increase performance within existing value-based arrangements. With ID especially, capitalizing on infection protocol-related activities to reduce health care-associated infections and readmission rates has proven to have a meaningful impact on the success of value-based arrangements. Merit-Based Incentive Payment System metrics are a frequent place to start when incorporating quality and value into risk-based arrangements. The below metrics are intended to be ID focused and specific and fairly universal across practice settings for implementation.

CAPTURING ID PHYSICIANS' EFFORTS TO IMPROVE THE COORDINATION OF CARE AND ENSURE THE CORRECT CARE PATHWAYS HAS BEEN SHOWN TO INCREASE PERFORMANCE WITHIN EXISTING VALUE-BASED ARRANGEMENTS.

2. Merit-Based Incentive Payment System

MIPS is a program that determines Medicare payment adjustments based on a composite of four performance scores (i.e., quality, cost, improvement activities and promoting interoperability). The final score determines if a Medicare payment adjustment will occur to the claim.

There are additional actions outlined by MIPS legislation that are related to ID physician activities and have a direct impact on value-based reimbursement. These activities include collecting and using patient experience and satisfaction data, engaging and following up with new Medicaid patients, improving documentation processes and providing more timely communication of test results. Existing measures that are defined within the 2021 MIPS that are designated for ID physicians (though some are less specific) include but are not limited to:

- Preventive Care and Screening: Influenza Immunization;
- Documentation of Current Medications in the Medical Record;
- Pneumococcal Vaccination Status for Older Adults;
- HIV/AIDS: Sexually Transmitted Disease Screening for Chlamydia, Gonorrhea and Syphilis;
- HIV Viral Load Suppression;
- HIV Medical Visit Frequency.

F. VALUE-BASED PAYMENT OPTIONS

Three effective value-based payment models dominate the VBC options today. Figures 3 and 4 provide additional information.

1. Panel- or capitation-based compensation that is paired with utilization metrics;
2. Hybrid compensation plans that isolate the risk-based reimbursement patients from fee-for-service populations;
3. Risk pool-funded models with up- and downside opportunity for physicians.

G. PAYMENT MODELS

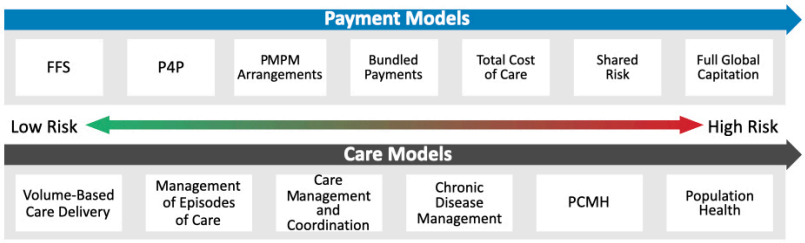

FIGURE 3: Payment and Care Delivery Continuum

Model Name	Model Description	Considerations	Market Condition(s)
Panel or Capitation With Utilization Incentives	Compensate physicians on a population basis. Use specific incentives to monitor activity levels.	This model requires the health system to emphasize value-based concepts despite limited risk reimbursement. Performance bonuses are typically based on a dollar amount per population unit.	The risk reimbursement population is small.
Hybrid Model	Apply value-based concepts to the risk reimbursement population only.	The hybrid model requires maintaining multiple compensation plan elements for physicians.	The risk reimbursement population is significant. Physicians prefer to be incentivized separately.
Risk Pool Model	Tie total physician cash compensation to performance on risk pool surplus levels at the end of the fiscal or calendar year.	The risk pool model requires accurate monitoring of utilization. It also requires agreement on the elements to be included in the risk pool calculation. Performance bonuses are typically based on a share of the pool surplus.	The risk reimbursement population is significant. Physicians are seeking a single compensation structure.
Bundled Payment	Single payment that covers all health care services provided during an episode of care. Episodes of care are defined as the paths from patients' initial diagnosis to their long-term health outcome.	If the total cost of care of an episode is less than the associated bundled payment, the participating providers keep the difference. If the total cost exceeds the payment, providers realize an economic loss.	The risk reimbursement population is small.

FIGURE 4: Value-Based Payment Models

Negotiation Process

A. DECISION-MAKERS AND STAKEHOLDERS

ID physicians interested in participating in value-based programs, implementing value-based measures as a component of compensation or being recognized for contributing to an institution's success in value-based and pay-for-performance programs first need to assess who the key decision-makers and stakeholders are for these topics in their institution. To do so, ID physicians should engage other specialists in their organization who participate in value-based arrangements or have compensation tied to value-based metrics and measures to understand their success stories and processes. Because value-based concepts remain relatively nascent, organizations may have unique approaches to the concepts and may include different stakeholders in decision-making. Additionally, ID physicians will need to be aware of the potential value-based contracts that are active within other specialties and consider ways to mitigate direct competition with these specialties for funding.

Hospitals and health systems bear significant economic risk for achieving certain measures. Therefore, ID physicians should identify who in the institution's leadership structure is held accountable for performance in pay-for-performance programs. That person can be an ID physician's strongest advocate for realigning compensation with the value of ID services, if the institution's performance in those programs is influenced by ID activities.

B. CASE STUDY: PRIMARY CARE

While value-related reimbursement concepts tailored to primary care are not perfectly reflective of the opportunity that exists for ID physicians, there are some lessons to be learned from primary care organizations that have thrived in a value-based care setting and have developed the various tools to succeed at scale. Put simply, these thriving organizations have built the care team so that the primary care physician can extend their reach and deploy care coordination efforts to ensure patients with chronic conditions are on the appropriate care pathway. The tracking mechanisms put in place decrease the number of patients who fall through the cracks and increase patient-provider engagement. ID physicians tend to engage in activities (complex care coordination, protocol management and development, quality initiatives oversight, etc.) that influence outcomes, even if they are not all patient facing or revenue generating.

Primary care organizations also monitor and coordinate patient medications, especially for patients with comorbidities. The most successful organizations have partnered primary care physicians with pharmacists to help with medication monitoring efforts and to optimize clinical therapies. OPAT is an example of a service ID physicians provide that also demonstrates the value of collaborating with pharmacists.

Lastly, many primary care organizations have implemented patient referral tracking technology. In an era where interoperability among electronic health records is scarce, these systems can serve not only as tracking tools but also as communication platforms for specialists to connect with patients' primary care physicians. These tools have reduced redundant treatment and enhanced the patient experience while strengthening the patient-provider relationship.

An ID physician's OPAT activities for risk mitigation by treating complications, communicating with patients and families, and coordinating care among generalists and other specialists similarly are intended to improve outcomes and reduce redundant or unnecessary treatment. Additionally, OPAT is an example of an activity that can decrease emergency department visits, readmissions and treatment complications, which result in care cost avoidance and a possible opportunity for shared savings. Based on these possible results, OPAT is a potential value-based model that can be negotiated with institutions and payers.

C. BUNDLED PAYMENTS

Bundled payments are a form of value-based reimbursement in which a single payment covers all the health care services provided during an episode of care. Episodes of care are defined as the paths from patients' initial diagnosis to their long-term health outcome. The objective of bundled payments is to promote an efficient use of resources while improving quality and care coordination. If the total cost of care of an episode is less than the associated bundled payment, the participating providers keep the difference. However, if the total cost exceeds the payment, providers realize an economic loss. In some cases, employed physicians may receive bundled payment distributions from institutions and payers based on their participation in the episode of care.

THE OBJECTIVE OF BUNDLED PAYMENTS IS TO PROMOTE AN EFFICIENT USE OF RESOURCES WHILE IMPROVING QUALITY AND CARE COORDINATION.

Bundled payments demonstrate that quality is not the sole driver in value-related payment concepts. Rather, value is a function of quality and cost. For example, through the appropriate deployment of resources, diagnostics and medical and surgical care, the overall cost of a single episode of care can be effectively managed while maintaining or possibly improving quality. Bundled payment programs are intended to incentivize providers to coordinate patient care with this cost reduction in mind. While quality initiatives that focus only on patient outcomes are important, bundled payment programs are an example of how cost is a key part of the value equation.

While there may not be existing arrangements tailored to ID, some bundled payment programs represent opportunities for ID physicians to highlight and capture the value of their services within an episode of care, such as the Comprehensive Care for Joint Replacement Model. The model requires collaboration among various specialties, including ID physicians who prevent and treat postoperative infections. If an ID physician's institution does not participate in bundled payment programs, the same concepts can be implemented as a component of compensation or hospital-to-physician reimbursement (e.g., private practice contracting with the hospital).

D. COMPENSATION FOR QUALITY METRICS IN ID

Based on the 2021 IDSA survey data, we know that ID physicians who have a component of compensation tied to their performance in quality metrics earn between 11% and 21% more than ID physicians without any compensation tied to their performance in quality. This holds true across all employment settings (hospital or health system employed, AMC employed and private practice). See figures 5 and 6 for additional details.

Depending on the incentive metric and employment setting, ID physicians who have a component of compensation tied to their performance in quality metrics tend to earn between $10,000 and $20,000 for meeting or exceeding their targets. See figure 6 for additional details.

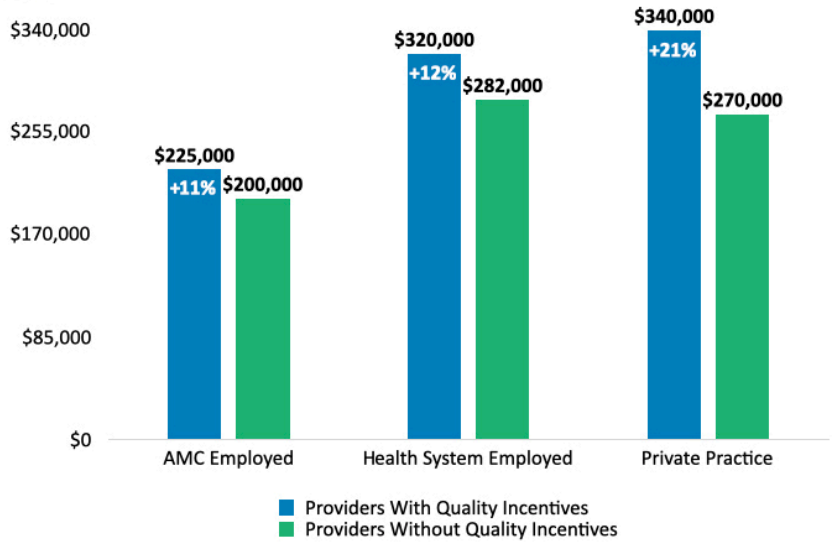

FIGURE 5: Quality Incentives by Employment Type, ID Physicians

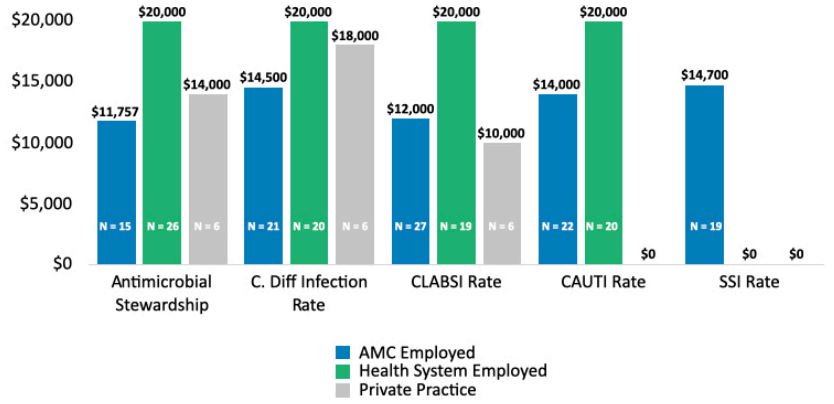

FIGURE 6: Incremental Quality Incentives Earned, ID Physicians

Understanding these facts, ID physicians should consider renegotiating compensation terms with their employers so that their individual or group performance in certain ID-related quality measures is incentivized. See IDSA's Physician Compensation Negotiation Playbook for additional guidance related to compensation negotiations.

E. STAKEHOLDERS FOR PARTICIPATION IN VALUE-BASED CONTRACTS

To successfully negotiate for participation in value-based contracts (existing or new), it will be vital to identify relevant stakeholders (i.e., hospital administrators versus local regulators and payers) who should be involved in negotiating and implementing VBC. This section includes details on what is needed to negotiate and implement a value-based contract.

F. DECISION-MAKERS FOR COMPENSATORY RECOGNITION IN VALUE-BASED OUTCOMES

To successfully negotiate for compensatory recognition in an institution's success in value-based contracts, it will be vital to identify relevant decision-makers on VBC and physician compensation (i.e., hospital administrators and department directors). ID physicians will need to know who in their organization can influence physician compensation in relation to value-based contract performance. For example, ID physicians can align with a chief medical officer, chief operating officer or hospital president regarding value-based contract performance and associated compensation. More specifically, alignment can occur with a chief financial officer to determine upfront nominal costs that result in significant downstream savings. It is important to consider the advantage of mitigating risk, negative public press and possible litigations when establishing value-based contracts and partnering with decision-makers.

ID PHYSICIANS WILL NEED TO KNOW WHO IN THEIR ORGANIZATION CAN INFLUENCE PHYSICIAN COMPENSATION IN RELATION TO VALUE-BASED CONTRACT PERFORMANCE.

G. ID SERVICE LINE APPLICATIONS

These considerations include the services being offered by an ID physician or practice. The list of potential services is long and variable depending on the market but can range from comprehensive ID services (e.g., a physician or practice that is responsible for all ID-related activities, clinical and administrative) to a single ID service (e.g., infection control, antimicrobial stewardship, COVID-19/special pathogens medical direction). Considering the predominate service lines that ID physicians support at their organizations, the following service lines emerge as opportunities for ID value-based care arrangements:

- Infection Control and Prevention;
- Antimicrobial Stewardship;
- Outpatient Parenteral Antimicrobial Therapy;
- Biosecurity, Biopreparedness and Emerging Infectious Diseases.

The IDSA Quality Improvement Committee also sought to identify the extent and types of measures currently available for use by ID clinicians, for accountability program reporting and/or quality improvement purposes. For each measure identified, we wished to identify who stewards those measures, and in which programs they are used. In conducting the search, we focused on measures related to the diagnosis and treatment of infectious diseases. The list of ID quality measures that can be used in VBC arrangements if applicable to a specific physician or practice type situation after consideration is given to the items in this section.

For the four service lines mentioned in the ID Service Line Considerations, table 2, Quality Measures for ID Service Lines, includes proposed metrics that may be considered for one's VBC arrangement. The measures included are measures that have been implemented in quality programs, measures that have been implemented in medical specialty societies' qualified clinical data registries or measures that are conceptual and require additional work to use in VBC arrangements. Table 2 is intended to help provide a quality measures starting point for ID physicians to then create tailored VBC arrangements within the ID service lines.

TABLE 2: Quality Measures for ID Service Lines

ID Service Line	Quality Measures	Level of Measurement	Level of Development
Infection Control and Prevention	1. National Healthcare Safety Network Catheter-Associated Urinary Tract Infection Outcome Measure	Facility	Implemented in CMS hospital quality program
	2. NHSN Central Line-Associated Bloodstream Infection Outcome Measure	Facility	Implemented in CMS hospital quality program
	3. NHSN Facility-Wide Inpatient Hospital-Onset *Clostridium difficile* Infection Outcome Measure	Facility	Implemented in CMS hospital quality program
	4. NHSN Facility-Wide Inpatient Hospital-Onset Methicillin-Resistant *Staphylococcus aureus* Bacteremia Outcome Measure	Facility	Implemented in CMS hospital quality program
	5. Influenza Vaccination Coverage Among Health Care Personnel	Facility	Implemented in CMS hospital quality program
	6. COVID-19 Vaccination Coverage Among Health Care Personnel	Facility	Implemented in CMS hospital quality program
Antimicrobial Stewardship	1. NHSN Antimicrobial Use Measure	Facility	Fully developed measure but not implemented in quality reporting program
	2. Reduction in days of therapy	Facility	Concept
	3. Reduction in length of stay for patients with specific types of infections	Facility	Concept
	4. Reduction in antimicrobial expense within pharmacy budget	Facility	Concept
	5. Reduction or maintenance of baseline for diagnostic testing expense	Facility	Concept
Outpatient Parenteral Antimicrobial Therapy	1. Percent of "cured" cases without relapse of primary infection within 30 days or admission to hospital due to primary infection of treatment complication	Physician, Group	Concept
	2. Number of hospital avoidance cases (ED to OPAT)	Facility	Concept
	3. Average length of stay for patients with infections amenable to OPAT	Facility	Concept
	4. Patient satisfaction, e.g., Hospital Consumer Assessment of Health Care Providers and Systems survey	Physician, Group	Implemented in CMS quality programs
Biosecurity, Biopreparedness and Emerging Infectious Diseases	1. Number of training programs held	Facility	Concept
	2. Number of biosecurity, biopreparedness and emerging infectious diseases training simulations conducted	Facility	Concept
	3. Level of demonstrated proficiency of biosecurity, biopreparedness and emerging infectious diseases training participants	Physician, Staff	Concept

H. IMPORTANCE OF DATA

To be successful in any type of VBC arrangement, one must have timely access to data and analytical support to calculate scores for quality measures. In working with the decision-makers in creating a VBC arrangement, asking for and securing organizational information technology support is critical. ID physicians should negotiate for terms that provide them with the best feedback loop available for data outputs that are easily understood and implementable in the clinical setting. The feedback loop may consist of dashboards or quality measure reports provided weekly, twice-weekly or other routine time intervals.

I. BARRIERS TO ADOPTION AND IMPLEMENTATION

When transitioning and implementing value-based arrangements and at-risk behavior, there are often challenges to factor in and consider. Historically, compensation has been highly aligned with productivity and reimbursement, making the shift to nonproductivity performance foreign and challenging to adopt. Key factors to consider when implementing value as a component in compensation include:

- Disconnect between work relative value units and care coordination;
- Patient care effectiveness through coordinated care teams;
- Incompatibility with reward mechanisms across the patient continuum;
- Communicating the shift from wRVUs and reimbursement mechanisms to be the ancillary driver rather than primary lever of compensation;
- Misaligned incentives and a lack of transparency in the achievement of value-based goals.

J. IMPACT ON AND COLLABORATION WITH OTHER SPECIALTIES

An ID physician will need to be aware of the potential value-based contracts that are active within other specialties and consider ways to mitigate direct competition with these specialties for funding. At the hospital system operational level, opportunities exist for ID providers to partner with other specialties to manage population-level protocols. A few examples include:

- Partnering with orthopedics to prevent and treat prosthetic joint infections;
- Partnering with general surgery or obstetrics and gynecology to decrease COLO SSI and HYST SSI;
- Partnering with transplant surgeons to prevent and treat infections after transplant.

K. BEST PRACTICES

When negotiating for the recognition of high performance in a value-based arrangement, physicians should be armed with clearly defined measures as well as evidence that these measures make a meaningful impact on institutional performance within the value-based arrangement. Compensatory negotiations have been more successful when an economic value can be discerned from the actions taken by the physician.

- Consider an incentive model that allows for team-based sharing and potential comanagement-like goals (i.e., reduction in readmission rates due to HAI, HAI mitigation and protocol strategies, and population-level infection planning).

- Consider negotiating for managing outbreak responses (e.g., COVID-19), which would include early identification and control of an outbreak within a hospital and would be considered a separate agreement rather than a longitudinal agreement for preparation activities. This requires a fair amount of effort. Importantly, physicians on a production-based compensation plan (e.g., compensation per wRVU, revenue less expense, percentage of professional collections) may not be fairly compensated during an outbreak or pandemic if services being rendered generate less revenue than traditional ID clinical services.

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