MedPAC Attempting to Measure Quality of Care

BY JENNIFER SILVERMAN Associate Editor, Practice Trends

WASHINGTON — Researchers with the Medicare Payment Advisory Commission are measuring the quality of care delivered by physicians as part of an overall analysis of physician resource use.

'We hope to look at variation in quality performance, to do this across conditions, regions, and to some extent across specialties," Karen Milgate, a research di-

LEVAQUIN® (levofloxacin) TABLETS LEVAQUIN® (levofloxacin) ORAL SOLUTION LEVAQUIN® (levofloxacin) INJECTION LEVAQUIN® (levofloxacin in 5% dextrose) INJECTION

rief Summary the following is a brief summary only. Before prescribing, see complete Prescribing formation in LEVAQUIN Tablets/Oral Solution/Injection labeling. preduce the development of drug-resistant bacteria and maintain the effectiveness of VAQUIN* (levolucacin) and other antibacterial drugs, LEVAQUIN should be used only treat or prevent infections that are proven or strongly suspected to be caused bacteria.

CONTRAINDICATIONS: Levofloxacin is contraindicated in persons with a history of hypersensitivity to levofloxacin, quinolone antimicrobial agents, or any other components

duct. SS: THE SAFETY AND EFFICACY OF LEVOFLOXACIN IN PEDIATRIC PATIEN-INTS (UNDER THE AGE OF 18 YEARS), PRECNANT WOMEN, AND NURSI, IMVE NOT BEEN ESTABLISHED. (See PRECAUTIONS: Pediatric Use, Pregnam ing Mothers subsections.) In tractas and dogs, the oral and intravenous administration of levofloxa in increased ostochondrosis. Histopathological examination of the weigh ints of immature dogs dosed with levofloxacin evealed persistent lessi tilage. Other fluoroquinolones also produce similar ensoinos in the wei tilage. Other fluoroquinolones also produce similar ensoins in the weight ance of these findings to the cilinical use of levofloxacin is unknown. (S "HARMACOLOGY in full Prescribing Information.) to and toxic psychoses have been reported in patients receiving quinolon

AL PHARMACOLOGY in full Prescribing Information.) ulsions and toxic psychoses have been reported in patients receiving quinolons ding levofloxacin. Quinolones may also cause increased intracranial pressure a al nervous system stimulation which may lead to tremors, restlessness, anvie needdeness, contision, halucinations, paranoia, depression, rightmares, insonn rarely, suicidal thoughts or acts. These reactions may occur following the first day se reactions occur in patients receiving levofloxacin, the drug should be disconti and appropriate measures instituted. As with other quinolones, levofloxacin shou set o seizures or lower the seizure threshold (e.g., severe cerebral arteriosalences psy) or in the presence of other risk factors that may predispose to seizures or lower the structure threshold (e.g., certain drug herapy, real dystanction.) (See PRECAUTION trand, Information for Patients, Drug Interactions and ADVERSE REACTION read occusional fatal humerscentility and/or analytesic reactions because we and occusional fatal humerscentility and/or analytesic reactions have be

erat, Information for Patients, Drug Interactions and ADVERSE REACTIONS.) lous and occasionally fatal hypersensitivity and/or anaphylactic reactions have been order in patients receiving therapy with quinolones, including levoltaxain. These zitons often occur following the first does. Some reactions have been accompanied ardiovascular collages, hypotension/shock, seizure, loss of consciousness, lingling, ioedema (including tonchespass, shortness of breath, and acute respiratory dis-solution (including tonchespass), shortness of breath, and acute respiratory dis-solution (including tonchespass), shortness of breath, and acute respiratory di-solution (including tonchespass), shortness of breath, and acute respiratory di-solution (including tonchespass), shortness of breath, and acute respiratory di-iscontinued immediately at the first appearance of a skin reactions. Levolfoxacin should itstamines, conticostensiciative measures, including oxygen, intravenous fluids, histamines, conticostensical presensativity reactions may require treatment with heptrime and other respiratory di-solution (including tonchespass) realing and avay management, as clinically cated. (See PRECAUTIONS and ADVERSE REACTIONS.)

indicated, (See PRECAUTIONS and ADVERSE REACTIONS.) Serious and sometimes fatal events, some due to hypersensitivity, and some due to uncertain etiology, have been reported rarely in patients receiving therapy with quinolones, including levoltoxacin. These events may be severe and generally occur following the administration of multiple doses. Clinical manifestations may include one or more of the following; fever, rash or severe dermatologic reactions (e.g., toxic epidermal necrolysis, Stevens-Johnson Syndrome); vascultits, arthralgia; maydia; serum sickness; allergic pneumonits; interstitial nephritis; acute renal insufficiency or failure; hepatitis; anuncie; acute hepatic necrosis or failure; anemai, including hemolytic and aplastic; thrombocytopenia, including thrombotic thrombocytopenic purpura; leukopenia; ponersensitivity and sunordive measures instituted. (See PRECAUTIONS: Information benesrestifivity and sunordive measures instituted. (See PRECAUTIONS): ity and supportive measures and ADVERSE REACTIONS.)

tor Yatemits and AUVERSE HEACTIONS.) Peripheral Neuropathy: Rare cases of sensory or sensorimotor axonal polyneuropathy affecting small and/or large axons resulting in paresthesias, hypoesthesias, dysesthesias and weakness have been reported in patients receiving quinoiones, including levolfoxacin. Levolfoxacin should be discontinued if the patient experiences symptoms of neuropathy including pain, burning, tingling, numbness, and/or weakness or other alterations of sensation including light touch, pain, temperature, position sense, and vibratory sensa-tion in order to prevent the development of an irreversible condition. order to preven the development of an interesting contained. membranous collisis has been reported with nearly all antibacterial ing levofloxacin, and may range in severity from mild to life-three ore, it is important to consider this diagnosis in patients who press a subsequent to the administration of any antibacterial agent.

eatment with antibacterial agents alters the normal flora of the colon and may permi regrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficili* one primary cause of "antibiotic-associated colitis."

the diagnosis of pseudomembranous colitis has been established, therapeutic sures should be initiated. Mild cases of pseudomembranous colitis usually respond

ADVERSE REACTIONS.) Tendon Effects: Ruptures of the shoulder, hand, Achilles tendon, or other te required surgical repair or resulted in prolonged disability have been reported receiving quinolones, including levofloxacin. Post-marketing surveillance reposi-tat this risk may be increased in patients receiving concomitant corti especially the elderly. Levofloxacin should be discontinued if the patient e pain, inflammation, or rupture of a tendon. Patients should rest and refrain for until the diagnosis of tendonitis or tendon rupture has been confidently exclud rupture can occur during or after therapy with quinolones, including levofloxa-PRECAUTIONS: General Prescribing LEVAQUIM in the absence of a proven

Compared to the second se

Although levofloxacin is more soluble than other quinolones, adequate hydration of patients receiving levofloxacin should be maintained to prevent the formation of a highly concentrated urine

ter levofloxacin with caution in the presence of renal insufficiency. Careful hservation and appropriate laboratory studies should be performed prior to and servation and appropriate laboratory studies should be performed prior to and rapy since elimination of levolfloxacin may be reduced. In patients with enal function (creatinine clearance <50 mL/min), adjustment of the dosage necessary to avoid the accumulation of levolfloxacin due to decreased clear-CLINICAL PHARMACOLOGY and OOSAGE AND DOMINISTRATION in full

See outmoth the second second

ease main of the or patients. The day should be used with caution in any patient is neruption) occurs. Ievefloxacin should be used with caution in any patient nown or supected CNS disorder that may predispose to seizures or lower the seize sehold (e.g., severe cerebral arteriosclerosis, epilepsy) or in the presence of of tatant drug therapy, renal dysfunction). (See **WARNINGS and Drug Interaction** with other quinolones, disturbances of blood glucose, including symptomatic try hypodycemic, have been reported, usually in diabeter patients receiving concomi atment with an oral hypodycemic agent (e.g., gyburide/gilbenclamide) or with hiss here patients, careful monitoring of blood glucose is recommended. If alvpogyce cuction occurs in a patient being treated with levofloxacin, levofloxacin should guilderactions and **AVERSE EFACTIONS**; how here the server an

Drug Interactions and ADVERSE REACTIONS.) Torsades de pointes: Some quinolones, including levofloxacin, have been with prolongation of the QT interval on the electrocardiogram and infreque arrhythmia. Rare cases of torsades de pointes have been spontaneously repo soci-marketing surveiliance in patients receiving quinolones, including le Levofloxacin should be avoided in patients with known prolongation of the d patients with uncorrected hypokalemia, and patients receiving class IA procainamide), or class III (amodarone, sotaloi) antiarrhythmic agents.

As with any potent antimicrobial drug, periodic assessment of organ system functions, including renal, hepatic, and hematopoietic, is advisable during therapy. (See WARN-INGS and ADVERSE REACTIONS.)

rector for the commission (MedPAC), said

at a recent commission meeting. "We also

hope to identify any gaps in quality mea-

The ongoing research supports the com-

mission's long-term goal of identifying

more "efficient" providers, as a tool to en-

Variation in resource use may include

cost of a service, types of services pro-

vided, or types of specialists that patients

see, Ms. Milgate said in an interview. It

surement development that we can."

courage greater efficiency in care.

- ding renar, response 3 and ADVERSE ERACTIONS.) **imation for Patients** ents should be advised: Patients should be counseled that antibacterial drugs including LEVAQUIN' (evofloxacin) should only be used to treat bacterial infections. They do not treat vira infections, patients should be told that although it is common to feel better early it the course of therapy, the medication should be taken exactly as directed. Skippin does or not completing the full course of therapy may (1) decrease the effective needs of the immediate treatment and (2) increase the likelihood that bacteria in develop resistance and will not be teatable by LEVAQUIN or other athbacterial drug increase the instructure. I showe heen associated with levofloxacin use. If sym increases and inc
- tereop residence and winnot be because by LE records of outer analose that peripheral neuropathies have been associated with levolfoxacin us that peripheral neuropathies have been associated with levolfoxacin us thors of peripheral neuropathy including pain, burning, tingling, muthy weakness develop, hey should discontinue treatment and contact their to drink fluids liberally;
- that antacids containing magnesium, or aluminum, as well as sucralfate, metal cations such as iron, and multivitamin preparations with zinc or Video® (dispaceing)
- The analysis containing integritestum, or administration, as Weit as Succiatate, metal cations such as iron, and multiWatamin preparations with zinc or Vider' (didanasing) should be taken at least two hours before or two hours after oral levofloxacin administration. See **Drug Interactions**; that levofloxacin oral tablets can be taken without regard to meals; that levofloxacin oral solution should be taken 1 hour before or 2 hours after eating; that levofloxacin may cause neurologic adverse effects (e.g., diziness, lighthead-edness) and that patients should be taken 1 hour before or 2 hours after eating; that levofloxacin may cause neurologic adverse effects (e.g., diziness, lighthead-edness) and that patients should know how they react to levofloxacin before they operate an automobile or machinery or engage in other activities requiring mental alertness and coordination. (See **WARNINGS and AVERSE REACTIONS**); to discontinue treatment and inform their physician if they experience pain, inflam-mation, or rupture of a tendon, and to rest and refrain from exercise until the diagnosis of tendinitis or tendon rupture has been confidently excluded; that levofloxacin may the associated with hunaresentitivity earchines eave foll-anti-
- utagnosis of tendinitis or tendon rupture has been confidently excluded; that levofloxacim may be associated with hypersensitivity reactions, even following the first dose, and to discontinue the drug at the first sign of a skin rash, hives or other skin reactions, a rapid heartbeat, difficulty in swallowing or breathing, any swelling suggesting angioedema (e.g., swelling of the lips, tongue, face, tightness of the threat, horasenses), or other symptoms of an allergic reaction. (See WARN-INGS and ADVERSE FIEACTIONS):
- INISS and ADVERSE HEACTIONS): to avoid excessive suntight or artificial ultraviolet light while receiving levoflo and to discontinue therapy if phototoxicity (i.e., skin eruption) occurs; that if they are diabetic and are being treated with insulin or an oral hypogly agent and a hypoglycemic reaction occurs, they should discontinue levofloxaci consult a physician. (See PRECAUTIONS: General and Drug Interactions.);
- consult a physicial, lose in the owner behavior and level lose of the interaction that concurrent administration of warfarin and level losacin has been assoc increases of the International Normalized Ratio (INR) or prothrombin clinical episodes of bleeding. Patients should notify their physician if the ing warfarin.
- that convulsions have been reported in patients taking quinolones, including levofloxacin, and to notify their physician before taking this drug if there is a history of this

g Interactions: Antacids. Sucralfate. Metal Cations. Multivitamins

g Interactions: Antacids, Sucraftate, Metal Cations, Multivitamins AQUII/Tablets: While the chelation by divalent cations is less marked than with other loones, concurrent administration of LEVAQUIN Tablets with antacids containing mesium, or aluminum, as well as sucraftate, metal cations such as iron, and multi-min preparations with zinc may interfere with the gastrointestinal absorption of floxacin, resulting in systemic levels considerably lower than desired. Tablets with cicks containing magnesium, aluminum, as well as sucraftate, metal cations such orn, and multivitamins preparations with zinc or Videx" (dialons) may as the is considerably lower than desired. These agents should be taken at least two hours are or two hours after levofloxacin administration.

verver en verv nours auter levotroxacin administration. LEVAOUIN Injection: There are no data concerning an interaction of intraven quinolones with oral antacids, sucraffate, multivitamins, Videx[®] (didanosine), or m cations. However, no quinolone should be co-administered with any solution cont ing multivalent cations, e.g., magnesium, through the same intravenous line. (DOSAGE AND ADMINISTRATION in full Prescribing Information.) Theonhylline. No significant direct of tendineum en the

Theophylline - No significant effect of levolfoxation on the plasma concentrations, AUC, and other disposition parameters for theophylline was detected in a clinical study involving 14 healthy volunteers. Similarly, no apparent effect of theophylline on levolfoxacin absorption and disposition was observed. However, concomitant administration of other quinolones with theophylline has resulted in prolonged elimination half-life, elevated serum theophylline levels, and a subsequent increase in the risk of theophylline related adverse reactions in the patient population. Therefore, theophylline levels should be closely mon-tiored and appropriate losage addiustments made when levelfoxacin is no -administered

phyline levels. (see WAHNINGS and PHELAUTIONS: General.) drain: No significant effect of levolfoxacin on the peak plasma concentrations, AUC, ther disposition parameters for R- and S-warfarin was detected in a clinical study ving healthy volunteers. Similarly, no apparent effect of warfarin on levolfoxacin rption and disposition was observed. There have been reports during the post-eting experience in patients that levolfoxacin enhances the effects of warfarin ations of the prothrombin time in the setting of concurrent warfarin and levolfoxacin have been associated with episodes of bleeding. Prothrombin time, International alized Abid (MN), or other suitable anticocaguidation tests should be closely mon-

Digoxin: No significant effect of levofloxacin on the peak plasma concentrations, AUC, and other disposition parameters for digoxin was detected in a clinical study involving sposition parameters for digoxin was uneverse in a discovery of the sposition parameters for digoxin there and disposition kinetics were si absence of digoxin. Therefore, no dosage adjustment for lew onlined when administered concomitantly.

when these agents are co-administered. Carcinogenesis, Mutagenesis, Impairment of Fertility: In a lifetime bioassay in rats, levofloxacin exhibited no carcinogenic potential following daily dielary administration for 2 years: the highest dose (100 mg/kg/day) was 14 times the highest recommended human dose (750 mg) based upon relative body surface area. Levofloxacin did not shorten the time to tumor development of UV-induced skin tumors in haritess abino (Skh-1) mice at any levofloxacin dose level and was therefore not photo-carcinogenic under conditions of this study. Demai levofloxacin dose level (300 mg/kg/day) used in the human dose room the highest levofloxacin dose level (300 mg/kg/day) used in the time to the physic budy. Budy to even budy the physical study.

mended human dose based upon relative body surface area and intravenou high as 100 mg/kg/day, corresponding to 1.2 times the high based by the surface area and intravenou dose based upon relative body surface area.

could also mean variation in resource use across regions. Using preliminary computer models, MedPAC researchers found variation in the cost of certain conditions.

For example, treatment of end-stage renal disease is fairly well defined, as the patient either requires long-term dialysis or a kidney transplant. For that reason, average versus median costs for end-stage renal disease episodes don't vary that much, said MedPAC researcher Niall Brennan.

Significantly more variation in cost was

Pregnancy: Teratogenic Effects. Pregnancy Category C.: Levofloxacin was not teratogenic in rats at oral doses as high as 810 mg/kg/day which corresponds to 9.4 times the highest recommended human dose based upon relative body surface area, or at intravenous doses as high as 160 mg/kg/day corresponding to 1.9 times the highest recommended human dose based upon relative body surface area. The oral doses of 810 mg/kg/day to rats caused decreased fetal body weight and increased fetal body surface area. The oral dose of 810 mg/kg/day corresponding to 1.5 times the highest recommended human dose based upon relative body surface area. The oral dose of 900 surface area. The oral dose of 900 surface area. The dose dose the owner dose dose the owner dose dose the upon relative body surface area. The oral dose the dose the dose that more host surface area, however, no adequate and well-controlled studies in pregnant women. Levofloxacin should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. (See WARNINGS.) **Nursing Mothers:** Levofloxacin has not been measured in human milk. Beased upon relative body surface area, nowener, no should be made whether to discontinue nursing or to discontinue the drug to the mother. **Pediatrio Use:** Safey and effectiveness in pediatric patients and adolescents below the age of 18 years. Of these of 75 patients (14%) were between the ages of 55 and 74 and 515 patients (14%) were 55 years or outer. The during thifferences in safety or feature there also the differences in safety or reported dinical experience has no tidentified differences in safety or the direct full greater samitivity of some other unividuals cannot be ruled during the direct weights and ounger subjects and ounger subjects and other reported dinical experience has no tidentified differences in nesponse between the ease of

Uneu out. Elderly patients may be more susceptible to drug-associated effects on the QT Therefore, precaution should be taken when using levofloxacin with concomita-that can result in prolongation of the QT interval (e.g. class N or class II antiarthy or in patients with risk factors for Torsades de pointes (e.g. known QT prolo uncorrected hypokalemia). See **PRECAUTIONS:** EdetRAL1 Torsades de Pointes.

The pharmacokinetic properties of levofloxacin in younger adults and elderly adults not differ significantly when creatinne clearance is taken into consideration. Howeve since the drug is known to be substantially excreted by the kidney, the risk of tox reactions to this drug may be greater in patients with impaired renal function. Becau elderly patients are more likely to have decreased renal function, care should be take in dose selection, and it may be useful to monitor renal function.

Electry patients are inder likely to have decreased retrai function, care sindulo be taken in does selection, and it may be useful to monitor renal function. ADVERSE REACTIONS: The incidence of drug-related adverse reactions in patients receiving level 5 chineat triats conducted in North America was 6.5%. Among patients receiving level for a lineat triats conducted in North America was 6.5%. Among patients receiving level adverse the rearby 4.1% discontinued level/foxacin therapy due to adverse events was similar in patients receiving level/foxacin doses of 750 mg once daily. 250 mg once daily, and 500 mg once or twice daily. In clinical triats, the following events were considered likely to be drug-related in patients receiving level/foxacin therapy 4.1%, monitias 0.2%, targets 0.3%, carsh 0.3%, dyspeptia. 0.3%, central monitiasts 0.1%, monitiast 0.2%, targets 0.3%, carsh 0.2%, wornting 0.3%, injection site pain 0.2%, injection site reaction 0.1%, injection site inflammation 0.1%, constigution 0.1%, rash macule-papular (-0.1%), dry mouth 0.2%, isomnolence 0.1%, carsh erythematous 0.1%, uniciaria 0.1%, oray mouth 0.2%, isomnolence 0.1%, carsh erythematous 0.1%, uniciaria 0.1%, dry mouth 0.2%, isomnolence 0.1%, carsh erythematous 0.1%, uniciaria 0.1%, dry mouth 0.2%, isomnolence 0.1%, carsh erythematous 0.1%, uniciaria 0.1%, consti-pation 3.1%.

Jauuri 3, 1%. In clinical trials, the following events occurred in 1 to 3% of patients, regardless of drug relationship: abdominal pain 2,5%, dizziness 2,4%, vomiting 2,4%, dyspepsia 2,3%, vagnitist 1,3%, rash 1,4%, chest pain 1,2%, prurius 1,24%, sinsitis 1,1%, dyspnea 1,3%, fatigue 1,2%, flatulence 1,2%, pain 1,3%, back pain 1,2%, rhinitis 1,2%, pharyngitis 1,1%. In clinical trials, the following events, of potential medical importance, occurred at a rate of 0.1% to 0.9%, regardless of drug relationship:

ot 0.1% to 0.9%, regardless of drug relationship: Body as a Whole – General Disorders: Ascites, allergic reaction, asthenia, edema, headache, hot flashes, influenza-like symptoms, leg pain, malaise, rigors, subs chest pain, syncope, multiple organ failure, changed temperature sensation, drawal syndrome; Cardiovascular Disorders. General: Cardiac failure, hypeter hypertension aggravated, hypotension, postural hypotension; Central and Peri Nervous System Disorders: Convulsions (seizures), hyperesthesia, hyperk hypertonia, hypoesthesia, involuntary muscle contractions, migraine, parest paralysis, speech disorder, stupor, tremor, vertigo, encephalopathy, abnormal go cramps, intracranial hypertension, ataxia; Gastor-Intestinal System Disorders mouth, dysphagia, esophagitis, gastrifus, gastroesophageal reflux, GL. hemon diostis, integrilal obstruction, macreatilis, tonnue edema melana strumative H vestibular Disorders: Earache, ear disorder NDS, timuits, Heart Rate vestibular Disorders: Earache, ear disorder NDS, timuits, Heart Rate dres: Arrhythmia, arrhythmia ventricular, attial fibrillation, bradycz k, ventricular fibrillation, heart block, palpitation, supraventricular icular tachycardia, tachycardia; Liver and Billary System Disorde tic function, cholecystilts, choletithiasis, hepatic enzymes increa e, jaundice; Metabolic and Nutritional Disorders: Hypomagnesemia, n, electrolyte ahormalihy, fluid overload; gout, flypenjycemia, n intorgen increase, weight decrease; Musculo: Skeletal Syste algia, arthrois, myadjia, osteomyetilis, skeletal pain, synovit n disorder, Myo, Endo, Percaratial and Valve Disorders: Angina pect infarction; Neoplasms: Carcinoma, thrombocythemia; Other Sp. ders: Parsonia, taste perversion; Patelet, Bleedina and Colin eruption, dry skin, eczema, genital prufus, increased Sucorder: respiratory tract infection; skin and Appendages Disorders: Alope eruption, dry skin, eczema, genital prufus, increased sweating, rash, sk skin exclutation, skin ulceration, urticaria, Urinary System Disorders: Alon Inuction, acute renal failure, hematuria, oliguina, urinary incontinence, urinar urinary tract infection; Vascular (Extracardiac) Disorders: Flushing, cere disorder, gangrene, pilebilits, purpura, thromobpilebilits (dee); Vision Abnormal vision, eye pain, conjunctivitis, White Cell and RES Disorders: Agran granulocytopenia, latwocytosis, lymphadenopativ, WBC abnormal NoS. In clinical trials using multiple-dose therapy, ophthalmologic abnormalities poing treatment with other quinoiones. The relationship of the drugs to thes not presently established.

not presently established. Crystalluria and cylindruria have been reported with other quinolones. The following markedly abnormal laboratory values appeared in >2% of patients receiving levofloxacin. It is not known whether this abnormality was caused by the drug or the underlying condition being treated. Hematology: decreased lymphocytes (2.2%) Post-Marketing Adverse Reactions: Additional adverse events reported from work-wide post-marketing names and the sections.

ust-markeung Auverse Reactions: Additional adverse events reported from world-wide post-markeling experience with levofloxaoin include: alleging meumonitis, anaphylactic hock, anaphylacticid reaction, dysphonia, ahonormal EEG, encephalopadity, eosinophilia, rythema multiforme, hemolytic anemia, multi-system organ failure, increased international formalized Raio (WR/prothrombin time, peripheral neuropathy, rhabonylesi, Stevens-phonos Syndrome, tendon rupture, torsades de pointes, vasodilation.

ORTHÓMCNEIL

OMP DIVISION ORTHO-MCNEIL PHARMACEUTICAL, INC. U.S. Patent No. 5,053,407. © OMP 2000 Revised August 2005 seen in the care of hypertension, diabetes, and heart failure. In areas where there is tremendous variation in resource use, "we might want to [see] if there are any guidelines in those areas that would better help us understand appropriate resource use levels," Ms. Milgate said.

MedPAC could identify conditions with variation in resource use where there might also be high variation in quality, Ms. Milgate said. Those might become priority areas for coordination of care.

Researchers are hoping to address questions such as "how do you attribute the care of a particular beneficiary to a specific physician?" she said. The minimum number of cases needed to get a reliable measurement, and who you actually compare

Several bills are pending to link relief from the sustainable growth rate formula to the implementation of a physician payfor-performance system.

a physician's performance with, are other considerations, Ms. Milgate said. "What other physicians see similar patients to that physician?" Ms. Milgate clarified that these claimsbased measures would not necessarily be used

in a pay-for-performance system.

That's a pretty easy decision because we don't have that information" yet, she said. Researchers are planning to base this analysis on currently available information: claims data.

More than 35 indicators on conditions important to Medicare will be used to measure quality, Ms. Milgate said. "Most of them are primarily what we've talked about before as process measures. For example, for beneficiaries with coronary artery disease, did they have an annual lipid profile?" Outcomes measures would also be used. For example, for beneficiaries with diabetes, what proportion of them ended up in the hospital with short- or long-term complications that were related to their diabetic conditions, she said.

MedPAC earlier this year advised the Department of Health and Human Services to test different types of provider payment differentials, which would essentially offer monetary rewards-bonuses, for example-for meeting certain goals on health care quality.

MedPAC Chair Glenn M. Hackbarth, J.D., said he hoped that Congress was prepared to move ahead with pay-for-performance legislation. Several bills are pending to link relief from the sustainable growth rate formula to the implementation of a pay-for-performance system for physicians, he said.

Obviously we support both ends of that bargain. We have argued that in order to assure access to quality of care, there does need to be some relief from the SGR. But at the same time, we think that it should be not just more money into the existing system, but one that consistently, in a more focused way, rewards good practice and quality of care."