

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
National Center for Preparedness, Detection and
Control of Infectious Diseases
Division of Healthcare Quality Promotion**



**Healthcare Infection Control Practices
Advisory Committee
February 15-16, 2007
Atlanta, Georgia**

DRAFT Record of the Proceedings

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ATTACHMENT 1

List of Participants

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Mr. Russell Olmsted
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Designated Federal Official

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Liaison and Ex-Officio Members

Dr. William Baine (Agency for
Healthcare Research and Quality)
Ms. Nancy Bjerke (Association of
Professionals of Infection Control
and Epidemiology, Inc.)
Ms. Joan Blanchard (Association of
periOperative Registered Nurses)
Dr. David Henderson
(National Institutes of Health)
Dr. Stephen Jencks (Centers for
Medicare and Medicaid Services)
[via conference call]
Dr. Sheila Murphey
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Ms. Roslyne Schulman
(American Hospital Association)

Dr. Robert Wise (Joint Commission on
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CDC Representatives

Dr. Denise Cardo, DHQP Director
Ms. Mary Andrus
Ms. Elizabeth Bolyard
Ms. Lillian Bryant
Mr. Adam Cohen
Ms. Kate Ellingson
Ms. Teresa Horan
Dr. John Jernigan
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Ms. Cynthia Lucero
Ms. Harriette Lynch
Ms. Tara MacCannell
Ms. Melissa Morrison
Dr. Daniel Pollock
Dr. Chesley Richards
Dr. Lynne Sehulster
Mr. Bruce Tierney

Guest Presenters and Members of the Public

Ms. Sandy Buehler (Kimberly-Clark)
Ms. Merylyn Francis
(National Quality Forum)
Dr. Marion Kainer
(Tennessee Health Department)
Dr. Suzanne Pear (Kimberly-Clark)
Ms. Jaime Ritter (Public)
Dr. Craig Umscheid (University of
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[via conference call]

EXECUTIVE SUMMARY

During the opening session of the meeting of the Healthcare Infection Control Practices Advisory Committee (HICPAC) on February 15-16, 2007 in Atlanta, Georgia, no members declared any new conflicts of interest for the record.

The Centers for Disease Control and Prevention (CDC) Division of Healthcare Quality Promotion (DHQP) informed HICPAC of its efforts to improve the development of future infection control guidelines with a more precise, consistent, clear and transparent process. The survival and transmission of organisms will be addressed in more detail. Language on 5 microns will be omitted. The portion of 100-micron airborne or droplet organisms that would be infectious will be clearly defined. More emphasis will be placed on the environmental aspects of masks and respirators.

Issues that should be measured and described to answer research questions with more precision will be clarified. A large database of relevant pathogens and an aerobiology research agenda for each organism will be developed. A stronger focus will be placed on substrate variables. A new rapid cycle approach will be implemented to produce and release guidelines to the infection control field in months rather than years. All future guidelines will be published in an electronic format only, but hard copies will still be available on a limited basis. The guidelines will be narrower in scope and limited to 16-20 pages.

The Center for Evidence-Based Practice (CEP) at the University of Pennsylvania Health System proposed two approaches for HICPAC to consider in improving its guideline development process. HICPAC could collaborate with external groups to develop guidelines, particularly Evidence-Based Practice Centers funded by the Agency for Healthcare Quality and Research (AHRQ). HICPAC could form a workgroup with CEP to pilot CEP's model in an upcoming infection control guideline.

DHQP proposed an amendment to surveillance definitions for home care that the Association of Professionals of Infection Control and Epidemiology (APIC) drafted in 2000. A core surveillance set would be developed with clearer definitions for surgical site infections (SSIs), central-line bloodstream infections (BSIs), and catheter-associated urinary tract infections (UTIs).

A secondary surveillance set would be developed with definitions for symptomatic and device-independent UTIs, respiratory infections, device-independent primary BSIs, other skin infections, osteomyelitis, eye, ear, nose and mouth infections, and other gastrointestinal illnesses. Gastroenteritis among enterally-fed clients and skin and soft tissue breakdowns are also being considered for inclusion in the amended home care definitions.

HICPAC's liaison and *ex-officio* members presented oral reports and distributed written summaries to outline current activities, priorities and future directions of their respective organizations: Advisory Council for the Elimination of Tuberculosis; AHRQ; American Hospital Association; Association of periOperative Registered Nurses; APIC; Board of Scientific Counselors; Food and Drug Administration; Joint Commission on Accreditation of Healthcare Organizations; National Institutes of Health (NIH); and Society for Healthcare Epidemiology of America.

The Electronic Health Records (EHR) Workgroup distributed its draft viewpoint paper on "Utilizing EHRs for Infection Control" to HICPAC for review and comment. HICPAC agreed to review the viewpoint paper and submit written comments to the workgroup's consultant by April 1, 2007. The workgroup would make two sets of revisions based on HICPAC's comments and present the final version during the June 2007 meeting for HICPAC's further discussion and formal approval.

DHQP summarized six studies conducted under the current cycle of the Prevention EpiCenter Program that are using EHRs to support surveillance and prevention efforts. The EpiCenters are expected to produce algorithms with defined performance characteristics over the next few months.

The National Quality Forum (NQF) briefed HICPAC on its current activities to support the development of national voluntary consensus standards for reporting healthcare-associated infections (HAIs). The update included a summary of key outcomes from deliberations of a Steering Committee and six technical advisory panels that NQF formed to analyze the technical aspects of performance measures for BSIs, UTIs, ventilator-associated infections, pediatric infections, SSIs, and reporting and implementation.

After releasing the draft standards for a 30-day public comment period in March 2007, NQF hopes to revise and present the final standards to its Board for a formal vote in May 2007. NQF requested HICPAC's guidance in several areas, particularly the development of definitions for ventilator-associated and healthcare-associated pneumonias.

DHQP described its ongoing activities to support states that elected to use the National Healthcare Safety Network for mandatory reporting of HAIs. DHQP also informed HICPAC about two research needs that should be addressed to refine state reporting of HAIs. No conceptual model for studies has been developed to evaluate the impact of mandatory reporting on rates, practices, consumers and providers. Methods have not been defined to use supplemental data from other sources, such as retrospective data and electronic data. DHQP requested HICPAC's assistance in identifying strategies to fill these research needs.

DHQP and the *ex-officio* member for the Centers for Medicare and Medicaid Services (CMS) briefed HICPAC on recent public reporting legislation. CMS is considering the possibility of placing methicillin-resistant *Staphylococcus aureus* (MRSA) in its quality improvement organization program for possible implementation in August 2008. The

Government Accounting Office (GAO) is currently holding entry meetings with Department of Health and Human Services (HHS) agencies in preparation of its formal investigation of HAIs.

Implementation of new Medicare legislation proposed by Congress would require the HHS Secretary to identify two preventable conditions that would serve as targets for non-payment of extra payments for co-morbidities or complications in diagnosis-related groups. The proposed rule is expected to be released for public comment in ~2 months. The regulation would enhance specific infections, but coding would present a significant limitation even with the provision that the “present on admission” modifier could be collected.

Several measures are being considered for the hospital pay-for-performance proposal that might be implemented in FY’09 pending Congressional approval. CMS asked HICPAC to attend and provide input during an upcoming public listening session on the proposal. CMS launched a patient instrument to support the Surgical Care Improvement Project (SCIP). CMS hopes that various SCIP measures will be included in the pay-for-performance model. Several SCIP measures are now included in data that hospitals must publicly report to be eligible for a full payment update. The HICPAC Chair announced his new role as the liaison to CMS’s discharge planning initiative.

The DHQP Director reported on two briefings to Congress on HAIs. The briefings focused on CDC’s collaborations with CMS, NIH and other groups on HAIs and HICPAC’s guideline on the prevention of MRSA. In response to the GAO investigation of HAIs, CDC held entrance conference calls with CMS and AHRQ. The DHQP Director proposed several options for HICPAC to participate in educating Congress, legislators, the media and general public about HAIs.

Several HICPAC members suggested steps that should be taken in an action plan to educate Congress, the media and public about HAIs. HICPAC noted that the action plan should be developed and implemented as a joint effort by CDC, HICPAC, federal agencies, professional organizations, and infection control experts in the field.

During the voting session, HICPAC **unanimously approved** three formal motions placed on the floor and agreed on strategies to conduct these activities. (1) The revision and completion of APIC’s draft surveillance definitions for home care was adopted as a formal HICPAC project. (2) The new rapid cycle approach would be used to develop a new guideline on norovirus prevention in healthcare facilities and update the existing UTI guideline in a parallel effort. (3) A critical validation of different definitions for ventilator-associated pneumonia was endorsed as a priority item for future research.

The HICPAC Chair led HICPAC in a review of the business items that were raised over the course of the meeting: (1) placing topics on the next meeting agenda; (2) holding either the June 2007 or October 2007 HICPAC meeting in Washington, DC; (3) disseminating

materials to HICPAC; (4) convening conference calls prior to the next meeting; (5) continuing to serve on workgroups; and (6) assisting with the development or revision of new or existing guidelines.

The dates of the next two HICPAC meetings are June 11-12, 2007 and November 12-13, 2007.

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**HEALTHCARE INFECTION CONTROL PRACTICES
ADVISORY COMMITTEE
February 15-16, 2007
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Draft Minutes of the Meeting

The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) National Center for Preparedness, Detection and Control of Infectious Diseases (NCPDCID) Division of Healthcare Quality Promotion (DHQP) convened a meeting of the Healthcare Infection Control Practices Advisory Committee (HICPAC). The proceedings were held on February 15-16, 2007 at CDC's Global Communications Center, Building 19, Auditorium B, in Atlanta, Georgia.

Opening Session

Dr. Michael Bell, the HICPAC Executive Secretary, called the meeting to order at 9:05 a.m. on February 15, 2007 in the temporary absence of Dr. Patrick Brennan, the HICPAC Chair. Dr. Bell welcomed the attendees to the proceedings and opened the floor for introductions. No HICPAC members declared any new conflicts of interest for the record; the list of participants is appended to the minutes as Attachment 1.

Future Direction of Infection Control Guidelines

Dr. Bell reported that CDC would address the survival and transmission of organisms in more detail in future guidelines. These issues will include infectivity, environmental features and droplet size. CDC would also make stronger efforts in future guidelines to inform infection control practitioners (ICPs) and other users of the guidelines about the 5-micron diameter related to the unique pathogenesis of *Mycobacterium tuberculosis* (*M.tb*) infection.

A broad array of respiratory pathogens other than *M.tb* would not be affected by the five-micron diameter. Although larger particles can float and are inhaled, most inhaled particles are not infectious. Most respiratory pathogens do not require terminal alveolar deposition, but these pathogens infect the upper respiratory mucosa.

Dr. Bell informed HICPAC about the status of the disinfection and sterilization guideline. DHQP is now waiting for the *Morbidity and Mortality Weekly Report* to produce galley proofs of the document. DHQP is also continuing its communications with the Food and Drug Administration (FDA) on revisions to the guideline. The document will be one of the last hard-copy guidelines that CDC will produce. The guideline is expected to be finalized in March 2007.

Dr. Bell informed HICPAC about the status of the isolation guideline. All portions of the document have been completed with the exception of the multidrug-resistant organism (MDRO) section. The isolation guideline is currently undergoing the final editing process with a review of recommendations and references. DHQP expects to post the document on the CDC web site by March 15, 2007.

In the isolation guideline, DHQP attempted to address uncertainties and better define the gap between traditional airborne and droplet categories. The background section was revised to reflect these issues, but the recommendations were not significantly changed. Other sections were amended by deleting the 5-micron language and emphasizing that the 5-micron particle size is specific to *M.tb* only.

DHQP recognized that inclusion of the 5-micron language in guidelines would diminish the credibility of infection control recommendations and science. In future guidelines, DHQP will exclude the 5-micron language and clearly define the portion of 100-micron airborne or droplet organisms that would be infectious.

In previous guidelines, DHQP focused on the ability of a mask or respirator to prevent infection that would be distinct from filtration or facial fit characteristics. However, DHQP acknowledged that this language was inadequate. DHQP has already taken steps to place more emphasis on the environmental aspects of masks and respirators in future guidelines.

DHQP funded a project to compliment several activities supported by the National Institute for Occupational Safety and Health (NIOSH). The DHQP study exposed volunteer medical students to rhinovirus in an aerobiology chamber with either no protection or protection from a mask, respirator or goggles. The purpose of the DHQP study was to determine the ability of individual or combined protective equipment to prevent rhinovirus infection. Although DHQP recognized that rhinoviruses are much smaller than influenza and other respiratory pathogens of interest, the potential exists to follow up the study with further research if the test model with rhinovirus can be replicated in other pathogens.

DHQP is also aware of the need to develop a more deliberate research agenda and clearly define issues that should be measured and described to answer research questions with more precision. DHQP is in the process of obtaining expert guidance from the NCPDCID Board of Scientific Counselors (BSC) on a pandemic influenza research agenda. To assist the BSC in providing input, DHQP provided the members with draft language from the isolation guideline and interim guidance on pandemic influenza planning for healthcare facilities.

DHQP is extremely interested in developing a large database of relevant pathogens and an aerobiology research agenda for each organism. DHQP is considering two approaches to undertake this effort. With an expensive method, large-scale and high-technological laboratories would be used to create a safe environment to perform complex measurements. With a less expensive method, suspended air in resealable containers would be used as a surrogate for distance by measuring time, humidity and temperature characteristics. DHQP plans to solicit input from the BSC and HICPAC on identifying initial organisms with an appropriate level of specificity and precision to include in the pathogens database.

Substrate variables are another area that DHQP will more strongly emphasize in future guidelines. Many experiments use phosphate-buffered saline or another buffer as a suspension matrix for the organism. However, respiratory mucous and blood are present in actual clinical settings with human beings and should be incorporated into models of respiratory secretions and blood.

Dr. Bell informed HICPAC of other efforts to improve infection prevention and control activities. Most notably, NIOSH recently convened an Institute of Medicine (IOM) panel with representation by industrial hygienists, infection disease specialists, occupational health physicians and a textile scientist. The IOM panel is charged with identifying strategies to redesign masks and respirators for safe reuse or better protection during a pandemic.

During the first meeting of the IOM panel, DHQP raised several points to inform the decision-making process. For example, masks and respirators traditionally have not been designed to protect wearers from infection. N95 and other filtering face piece respirators were designed for industrial protection against asbestos, coal dust and similar particulate matter. No data have been generated to date to support the effectiveness of a respirator against transmission of tuberculosis or any other infection.

The construction and materials used in the design of respirators are quite variable. In the United States, the employer rather than the manufacturer is responsible for ensuring good fit characteristics. Many products that are manufactured for use in the United States are not effective or ideal for healthcare workers (HCWs). Currently available respirators are hot, difficult to wear, inefficient from a resource perspective, and extremely cumbersome for breathing and speaking.

DHQP also provided the IOM panel with certain characteristics that would improve current devices. For example, respirators should be designed for HCWs that do not require fit-testing, are more comfortable for breathing, protect against infections or exposure to infectious material, have a longer shelf-life, and are reasonably inexpensive to produce or could be reused. The IOM panel appeared to be receptive to these recommendations, but DHQP would also attend the follow-up meeting on February 22, 2007 to reinforce these strategies.

Dr. Bell emphasized that DHQP is committed to improving its capacity and practice of developing guidelines because data needs, technology, methods to deliver information, and requests for information have drastically changed over time. He noted that the last two infection control guidelines were voluminous and did not serve as the most efficient or rapid method to provide recommendations to the field.

Dr. Bell described the new rapid cycle approach DHQP is proposing to address this issue. Guidelines would be produced and released to the infection control field in months rather than years. All future guidelines would be published in an electronic format only, but hard copies would still be available on a limited basis. The guidelines would be narrower in scope and limited to 16-20 pages.

During the discussion, Dr. Bell asked HICPAC to determine an appropriate cycle for using guidelines and identify issues that could serve as a model for the new rapid cycle approach. For example, an update of the urinary tract infection (UTI) guideline most likely would not be a candidate for the new process because this issue is limited to only a few major categories. A surgical site infection (SSI) guideline could be developed with the new approach due to its major categories of endoscopic, head and neck, and other specific procedures.

A norovirus guideline could be developed with the new approach in describing various strategies, such as combining environmental and individual infection control and occupational health issues. A norovirus-specific guideline would eliminate the need for ICPs to compile data on norovirus from three different sources. The new approach could also be used to develop guidelines on applying surveillance definitions for home care.

Dr. Bell informed HICPAC that the Infectious Disease Society of America (IDSA) and the Society for Healthcare Epidemiology of America (SHEA) formed a task force to create joint public reporting guidelines. DHQP would remain in contact with the task force to obtain current updates on this effort and ensure that the guidance would not replicate or contradict HICPAC's public reporting document.

Dr. Bell concluded his presentation by informing HICPAC that time was set aside on the following day for the members to consider, discuss and take a formal vote on issues raised during day 1 of the meeting. During the voting session, he asked HICPAC to identify an issue that would serve as the best "test case" in applying the new rapid cycle approach to the next guideline. However, he clarified that DHQP is not proposing to change the current

IA, IB, IC and II categories used to rank recommendations in HICPAC guidelines because ICPs and other users are accustomed to this system.

CDC is attempting to develop guidelines based on a more precise, consistent, clear and transparent process. Dr. Bell also noted that if HICPAC was unable to agree on a candidate for the new rapid cycle approach on the following day, a vote could be taken at a later time during a conference call.

To guide HICPAC's discussion, additional details were provided on efforts by the IDSA/SHEA task force to develop joint public reporting guidelines. In the interim of task force members attending the next HICPAC meeting, Dr. Denise Cardo, the DHQP Director, suggested that DHQP and HICPAC participate on a conference call with the task force co-chairs.

Dr. Robert Wise, the HICPAC liaison to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), provided JCAHO's perspective and understanding of the role of the IDSA/SHEA task force. The task force assured JCAHO that the joint public reporting guidelines would not overlap, confuse or provide conflicting points of view with other groups. The task force emphasized that HICPAC and other professional organizations would be extensively engaged in efforts to use existing evidence in developing the public reporting guidelines with a single voice and a national perspective.

During the discussion, Dr. Cardo asked HICPAC to consider its future role in several activities: (1) identifying evidence-based strategies to improve health, (2) developing guidelines for issues without clear evidence, (3) developing and defining the inhalational infection transmission research agenda to decrease transmission of infections among HCWs, (4) implementing recommendations, (5) providing guidance to CDC and other HHS agencies on developing other infection control research agendas, and (6) continuing to provide guidance on public reporting, strategies to decrease infections caused by MDROs, and other policy issues.

Dr. Cardo clarified that HICPAC could serve in a leadership role or as a consultant to CDC in conducting these activities. She pointed out that Congressional staff and professional organizations continue to rely on HICPAC's expertise and recommendations in making decisions on healthcare infection control practices.

Several HICPAC members were extremely pleased with, fully supported and commended CDC's plans to develop an inhalational infection transmission research agenda and use the rapid cycle approach to develop infection control guidelines in the future. However, other members pointed out that the proposed approach strongly focuses on basic biological issues. Less emphasis is placed on the value of adhering to administrative controls that are critical to the healthcare setting, such as cough etiquette, respiratory therapy and isolation, hand hygiene, influenza vaccination and treatment of latent TB.

Several HICPAC members made suggestions to consider in ongoing efforts to improve infection control guidelines in the future. A number of members also proposed strategies in response to Dr. Cardo's request for input on HICPAC's future role.

- A norovirus guideline should serve as the test case for the new rapid cycle approach for guidelines because long-term care facilities (LTCFs) are currently experiencing norovirus outbreaks.
- CDC should develop and distribute objective criteria to assist the infection control community in understanding and explaining to administrators the current categorization system that is used to rank recommendations in guidelines. A clearly defined process would provide ICPs with justification to support funding requests to implement "IB" recommendations.
- The infection control research agenda should include rigorous and well-designed epidemiologic studies on the application of aerobiology data into actual practice.
- HICPAC's future role should be to timely respond to emerging public health issues, address gaps in knowledge, carefully review the literature to support recommendations, develop a consistent and reproducible system to rank the evidence, release guidelines in an electronic format, and guide the infection control research agenda. This approach would allow HICPAC to more effectively serve the healthcare, infection control and public health communities at the national level.
- HICPAC's future role should be to provide clarification in areas where the evidence is uncertain. HICPAC could undertake this effort by developing and releasing "just-in-time" practice commentaries or guidance documents.
- HICPAC's future role should be to promote innovative infection control programs, identify the most cost-effective interventions in the healthcare system, and determine the most important needs in the field.
- HICPAC's role should be to adopt and reflect a culture of continuous performance improvement and front-line realities in future guidelines. For example, HICPAC could rapidly develop and release a guideline in three to four months with an understanding that the research would have gaps and should be continued in the future. At a later time, HICPAC could publicly acknowledge that the guideline would be revised based on new evidence.
- Future guidelines should contain general parameters or a broad interpretation of recommendations to reflect various implementation strategies and different cultural issues for small hospitals, large academic centers, LTCFs and other types of healthcare facilities. The two-tiered approach in the MDRO guideline should be reviewed as a model in this effort.
- Future guidelines should identify specific infection control staff who would be needed to implement the recommendations.
- The research agenda should include a validation study to complete the infection control staffing research project that was initiated eight years ago.

This study would be timely because current infection control practices are still limited by lack of resources.

Dr. Bell made several remarks in response to HICPAC's comments. DHQP would conduct behavioral studies from an MDRO rather than an aerobiology perspective. This research would focus on hand hygiene, recommended practices for line insertion and other behaviors. To clarify the recommendation ranking system, future guidelines could contain a preamble to clearly define each of the four categories and summarize CDC's expectations on applying each category to actual practice.

Update on the Guideline Development Process

Dr. Craig Umscheid, Co-Director of the Center for Evidence-Based Practice (CEP) at the University of Pennsylvania Health System, joined the meeting by conference call. He reminded HICPAC that during the previous meeting, he presented CEP's nine-step process of developing evidence-based guidelines. He recalled that following his presentation, several members emphasized the critical need for HICPAC to create a more efficient and timely process to produce infection control guidelines of a higher quality.

Dr. Umscheid summarized the major differences between the HICPAC and CEP processes. HICPAC takes a comprehensive approach in developing guidelines and does not identify or prioritize key questions that should be answered. HICPAC guidelines address all components of an entire issue. HICPAC guidelines reflect an exhaustive review of the literature rather than a systematic review of specific issues.

Dr. Umscheid proposed two approaches HICPAC could take to improve its guideline development process. HICPAC could collaborate with external groups to develop guidelines, particularly Evidence-Based Practice Centers funded by the Agency for Healthcare Quality and Research (AHRQ). HICPAC could form a workgroup with CEP to pilot CEP's model in an upcoming infection control guideline, such as a norovirus guideline.

Dr. Umscheid underscored the importance of basing guidelines on the best available evidence, but he clarified that high-quality randomized control data would not be available in all cases. Solid observational trials, case series, case reports or expert consensus might be the strongest available data at the time. However, he cautioned that no gold standard, scales or methods have been developed to date to rank this type of evidence.

Several HICPAC members supported Dr. Umscheid's proposed approaches for HICPAC to collaborate with Evidence-Based Practice Centers and form a HICPAC/CEP workgroup to pilot CEP's model in an upcoming infection control guideline. The members pointed out that HICPAC guidelines traditionally are developed over a number of years, while CEP piloted its step-wise process and developed an evidence-based practice guideline over a period of

<4 months. A HICPAC/CEP pilot project could also assist HICPAC in rewriting certain sections of existing guidelines in a more timely fashion and a more user-friendly format.

Several HICPAC members suggested approaches to refine HICPAC's process of developing and updating infection control guidelines.

- HICPAC's future guidelines should be able to demonstrate and measure the true cost and value of the recommendations to the infection control community.
- The HICPAC/CEP pilot project should make a clear distinction between appropriate situations to implement IA versus IB recommendations.
- HICPAC should explore the possibility of simplifying its current ranking scheme with a two-level system of "strong" recommendations at levels A, B or C and "weak" recommendations at level II.
- HICPAC should use its existing compendium of 10-15 major guidelines to create a formal system to periodically review and update guidelines. For example, HICPAC could convene an expert panel on each of the major guidelines to obtain consensus on whether the document should be revised. HICPAC could administer a survey to ICPs to determine the extent to which the guidelines are being used in the field.
- HICPAC's future guidelines should contain recommendations that are feasible for all types of healthcare facilities to practically apply in the field.
- HICPAC should explore the possibility of identifying a group of professional organizations or other experts to serve as the implementation arm of infection control guidelines. These groups could address cost, performance improvement and methodologies at the bedside.

In response to one of HICPAC's comments, Dr. Cardo announced that HHS will require or recommend an assessment of the value, cost benefit or impact of all guidelines in the future. To respond to HHS's new requirement, HICPAC will need to more extensively engage JCAHO and the Centers for Medicare and Medicaid Services (CMS) in developing guidelines in the future.

Dr. Cardo emphasized the need for HICPAC to clearly define a process to rank and use the evidence; identify and prioritize questions to answer up front; and establish a solid rationale for each recommendation in the guideline. Regardless of the approach HICPAC takes in the future, a transparent and clearly defined strategy would improve the overall guideline development process.

Update on Surveillance Definitions for Home Care

Ms. Tara MacCannell, of DHQP, provided an update on surveillance definitions for home care that the Association of Professionals of Infection Control and Epidemiology (APIC) drafted in 2000. The purpose of surveillance in home care is to establish baselines and monitor trends in infections associated with home care. APIC's draft definitions were based on LTCF and nosocomial definitions published in 1991 and 1996, respectively. APIC's draft definitions addressed the availability of laboratory and radiologic tests to meet surveillance criteria.

Several interpretations and adaptations of APIC's draft definitions have been made over time. These publications cited a definite need for guidance with criteria that would be effective in the home care setting. Other organizations developed surveillance networks partially based on APIC's definitions. APIC's draft definitions are generally grouped into seven categories: symptomatic UTIs, respiratory infections, primary bloodstream infections (BSIs), skin infections, osteomyelitis, eye, ear, nose and mouth infections, and gastrointestinal illness.

Of ~8 million total clients in the home care population, 1.2 million are identified with infections in the United States each year. Use of a medical device is the greatest predictor of a healthcare-associated infection (HAI). At any given time, 20% of home care clients require wound management. Overall deficiencies in surveillance hinder the ability to quantify trends within and between agencies. The literature contains a limited number of evidence-based studies or reviews to address surveillance in home care. The spectrum of criteria is diverse in defining symptoms to characterize infection. Denominator data vary from the number of home care visits to device days.

Challenges in using home care surveillance data to detect HAIs and develop surveillance programs include the lack of definitions and methods; the lack of continuity of care; loss of clients to follow-up; deficits in trained ICPs; difficulties in capturing laboratory and radiologic tests; and difficulties in capturing both numerator and denominator data.

Based on a literature review, input from CDC, and discussions with leading experts in the fields of home care, surveillance and infection control, an amendment is being proposed to APIC's draft surveillance definitions. A core surveillance set would be developed with clearer definitions for SSIs, central-line BSIs and catheter-associated UTIs. The core surveillance set would be designed for use by home care groups. Other issues that are being considered for inclusion in the amended definitions are gastroenteritis among enterally-fed clients and skin and soft tissue breakdowns.

A secondary surveillance set would be developed with definitions for symptomatic and device-independent UTIs, respiratory infections, device-independent primary BSIs, other

skin infections, eye, ear, nose and mouth infections, other gastrointestinal illnesses and osteomyelitis.

The amendment to the definitions is being proposed due to several factors. The scope of APIC's draft definitions addresses pan-surveillance without guidance on epidemiologically significant events to monitor. Difficulties would occur in distinguishing between community and home versus home care involvement among selected surveillance targets. Challenges would arise in demonstrating prevention strategies or conducting a process review among selected surveillance targets.

Key differences between APIC's current draft definitions and the proposed amendment are highlighted as follows. The current draft definitions define an "onset of surveillance" as 48-72 hours or depending on the incubation period. No definitions are included for the scope of home care. Clinical sepsis definitions for BSIs are included. The proposed amended definitions would define "onset of surveillance" as 48 hours after admission to home care service. The scope of home care and care providers would be defined. Clinical sepsis definitions for BSIs would be removed. The current mixture of laboratory and clinical features would be retained to satisfy infection criteria.

Ms. MacCannell asked HICPAC to particularly focus on three issues during its discussion of the proposed amendment to APIC's draft definitions: (1) incorporation of surveillance data into the Outcome and Assessment Information Set (OASIS) that is required by CMS; (2) concurrent publication of guidance on methods to perform surveillance in home care; and (3) the value of surveillance of SSIs from implants >1 year post-operatively.

Ms. MacCannell concluded that institutions must demonstrate evidence of an ongoing or pending infection control surveillance system to meet minimum accreditation standards. In the future, the possibility exists that JCAHO could use the home care definitions to establish a precedent for surveillance in home care agencies.

Ms. Nancy Bjerke, the HICPAC liaison to APIC, was confused about the proposed amendment to the draft definitions. APIC previously asked HICPAC to formally endorse or finalize the current draft definitions. Ms. Bjerke previously informed HICPAC that the original authors agreed to finalize the draft definitions if HICPAC did not undertake this effort. The proposed amendment to the draft definitions represented a complete reversal to APIC's original request. Ms. Bjerke reported that the APIC Practice Guidance Council recently asked about the status of HICPAC's endorsement or completion of the draft definitions.

Dr. Brennan made several remarks to eliminate confusion about the proposed amendment to APIC's draft definitions. In terms of endorsing documents developed by other organizations, CDC previously provided HICPAC with legal guidance about its role in advising the HHS Secretary, CDC Director and DHQP. To endorse documents developed

by other groups, HICPAC would need to devote the same amount of effort as in developing its infection control guidelines.

In terms of finalizing APIC's draft definitions, Dr. Brennan announced that several HICPAC members informally met during the SHEA meeting in March 2006 and agreed to consider a new effort of developing definitions. Since that time, HICPAC has been challenged in conducting this activity due to its traditional focus on guidelines rather than definitions. To assist HICPAC in overcoming this barrier, CDC reviewed the draft definitions, assessed the home care field and provided preliminary feedback.

Dr. Brennan described HICPAC's two options in proceeding on this issue. One, HICPAC could form a workgroup and use the proposed amendment to the draft definitions as an initial step in developing a critique. The critique would be distributed to APIC for review and consideration and would serve as HICPAC's final product for the draft definitions. Two, HICPAC could form a workgroup and become fully engaged with APIC in updating, finalizing and endorsing the draft definitions as a joint HICPAC/APIC document. During the voting session on the following day, Dr. Brennan confirmed that HICPAC would make a decision on one of the two options.

Dr. Cardo urged HICPAC to consider the actual purpose of the home care definitions. For example, home care and healthcare definitions should be consistent if the purpose is to compliment surveillance conducted in hospitals. Providers should be able to react to home care surveillance data if the purpose is to take more proactive measures in prevention. The home care definitions should not focus on infections if the purpose is to monitor trends. The home care definitions should not be used to define or calculate burden because this goal could be achieved through a prevalence survey.

Several HICPAC members supported standardized definitions with measurable and quantifiable outcomes to assist home care agencies in critically assessing preventable complications that are attributable to home care. However, some members did not see the value of the proposed amendment to the draft definitions to individual patients.

Several HICPAC members made comments on the draft definitions in preparation for the voting session on the following day.

- Inclusion of SSIs in home care definitions should be reconsidered because monitoring SSIs is extremely difficult and would provide limited value. Surveillance of SSIs in the home care setting would present a tremendous obstacle unless denominator data are collected and provided to the original institution and surgical practitioner. Home care patients with wounds are frequently mis-diagnosed in the community by primary practitioners and typically receive inappropriate or unnecessary antibiotics.
- Inclusion of BSIs in home care definitions should be reconsidered unless denominator data are collected.

- SSIs should be included in home care definitions to notify the hospital where the surgery was performed. Operative procedures should serve as the denominator.
- Explicit and specific rules or criteria should be established if a decision is made to incorporate surveillance data into OASIS. This approach would ensure that data reported to OASIS truly reflected outcomes in the home care setting.
- The home care definitions should be designed to educate patients and family members who would provide care. The traditional question/answer paradigm should not be used.
- The function, scope and purpose of the home care definitions should extend beyond monitoring. The definitions should include a performance improvement perspective to assist the public in selecting a home care agency.
- The home care definitions should extend beyond definitions alone to include methodologies that identify the burden to home care patients.

Liaison and *Ex-Officio* Reports

Dr. Jeffrey Engel reported that the key agenda items during the December 2006 meeting of the Advisory Council for the Elimination of Tuberculosis (ACET) included extensively drug-resistant TB and anticipated reductions in the TB federal budget. At the state level, decreased funding has resulted in fewer educational activities and less support to counties with high TB morbidity. Federal supplements are critical to states for directly observed therapy and other standard of care issues for TB. Diminishing fiscal support will lead to a resurgence of TB. ACET and CDC will publish a new guideline in December 2007 on TB in foreign-born persons.

Dr. William Baine reported that AHRQ is continuing its involvement with public reporting of hospital infections data. AHRQ is attempting to generate more interest in identifying potential outcomes and adverse or unintended consequences of public reporting. AHRQ and the Center for Quality Improvement of Patient Safety are currently discussing potential disparities and risks for hospital infections. AHRQ is still awaiting feedback from the Office of the HHS Secretary on the Patient Safety and Quality Improvement Act of 2005.

Ms. Roslyne Schulman reported that the American Hospital Association (AHA) and several other organizations signed a letter encouraging an expanded recommendation for universal influenza vaccination for school-age children through 18 years of age. The letter will be sent to CDC's Advisory Committee on Immunization Practices. AHA submitted comments to HHS's request for information on its guidance for prioritization of pre-pandemic and pandemic influenza vaccine. AHA's comments can be viewed on its web site.

The AHA Health Research and Education Trust administered a survey in July 2006 on hospital influenza prevention strategies and HCW vaccination practices. The survey was designed to benchmark activities hospitals conduct to prevent influenza among HCWs; determine administrative costs of various HCW vaccination programs; obtain more information on hospital vaccination rates; and evaluate strategies hospitals use to implement HCW vaccination programs. Results of the survey were distributed to HICPAC for review.

AHA, CDC and other groups are jointly assisting in the dissemination and implementation of the revised recommendations for HIV testing of adults, adolescents and pregnant women in healthcare settings.

Ms. Joan Blanchard reported that the Association of periOperative Registered Nurses (AORN) and APIC hosted the 11th Infectious Disease Conference in December 2006. AORN is in the process of shifting from textbooks to an online database for its recommended practices. However, textbooks will still be available to AORN members and non-members for a fee. In the future, AORN will reformat its existing guidelines and guidance statements into recommended practices.

AORN is continuing to monitor the use of alcohol-based skin preparation in anesthetizing locations. Nebraska and Pennsylvania banned the use of alcohol-based skin preparation in anesthetizing locations in 2005 and 2006, respectively. The American Society for Healthcare Engineering wrote a proposed Tentative Interim Agreement for the National Fire Protection Association in Nebraska because this ruling had not been revised in 25 years.

The ruling was changed with the understanding that steps would be followed to ensure safe use of alcohol-based preparations. CMS intervened by publishing and distributing a memorandum regarding this issue in January 2007. AORN's 2007 recommended practice on skin preparation stated that the surgical site and surrounding area should be prepared with an antiseptic agent.

Ms. Nancy Bjerke reported that APIC held its 2007 Future Summit in January 2007 with several key stakeholders, including industry partners, ICPs and organizational leaders. The participants identified the major attributes of the ideal future state of infection prevention and control and assessed a typical infection control program in an average U.S. hospital. The participants also ranked the top ten most important infection prevention measures in an ideal prevention system. A number of key stakeholders who attended the summit will participate in meetings with APIC to further develop the ideal prevention system.

APIC and SHEA jointly developed a position paper on legislative mandates for active surveillance of methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococcus. The position of APIC and SHEA was that mandating active surveillance of

MRSA through legislation was unnecessary. The position paper was posted online in January 2007. APIC will not obtain results of the MRSA prevalence study until March 2007.

Dr. Brennan reported that the NCPDCID Board of Scientific Counselors (BSC) held a conference call in preparation of a meeting in March 2007.

Dr. Sheila Murphey reported that FDA is continuing to develop policy for the use of N95 respirators during pandemic influenza. FDA approved CDC's new assay for the A/H5 influenza strain in February 2007. The assay will be distributed to the Laboratory Response Network. In January 2007, HHS announced the award of contracts to three vaccine manufacturers to develop adjuvant-based pandemic influenza vaccines. The contracts will allow proprietary adjuvant vaccines to be shared with other vaccine manufacturers. FDA will closely collaborate with the companies during the Phase I, II and III trials.

In January 2007, HHS announced the award of a contract to a manufacturer for advanced development of its anti-influenza drug. FDA gave the drug a fast track designation. In December 2006, FDA announced its issuance of warning letters to nine firms that marketed products with false claims to prevent or treat avian influenza. In January 2007, FDA published its proposed rule on the use of materials derived from cattle in medical products intended for use in humans and drugs intended for use in ruminants. The proposed rule is now available for public comment.

Dr. Robert Wise reported that JCAHO completed interviews with leading infection control and epidemiology organizations on critical concerns regarding MDROs and strategies to reduce the impacts from these organisms. The purpose of the interviews was to identify priority areas for infection control standards development. JCAHO is currently collaborating with the HAI Allied Task Force to create HAI evidence-based guidelines and a position paper. The guidelines will summarize the current literature and describe a practical approach to implementation of HAI activities and measurement. JCAHO recently published a new book and an article on infection control.

Dr. David Henderson reported that the National Institutes of Health (NIH) is continuing to conduct activities under the Bethesda Hospital Emergency Preparedness Partnership. The preparedness partners completed a community disaster drill in December 2006. NIH is continuing its pandemic influenza preparedness activities.

The Government Accounting Office (GAO) recently notified HHS agencies about a new review of HAIs in hospitals. The review is in response to a request by the House Committee on Oversight and Government Reform. At a minimum, GAO plans to contact CMS, CDC, AHRQ and NIH. GAO has particularly noted its interest in speaking with clinicians who manage hospitals and conduct infection control activities. NIH has tentatively scheduled an entrance conference for February 20, 2007.

Dr. Brennan presented the SHEA report in the absence of Dr. Michael Tapper, the SHEA liaison. SHEA participated in a new initiative by the Institute for Healthcare Improvement (IHI) to prepare MRSA guidance. The SHEA/IDSA Task Force on HAIs identified its goals and timeline to develop a guideline with both process and outcome measures for HAIs, including catheter infections, BSIs, MRSA, ventilator-associated pneumonia (VAP), and *Clostridium difficile* (*C. difficile*). The SHEA/APIC Communications Network of >1,300 members is continuing to provide a forum to collect and distribute routine and emergency information.

SHEA is continuing to participate on monthly public policy conference calls with its partners to develop joint policy statements and coordinate efforts to influence the outcome of public policy issues regarding infection control in healthcare. SHEA and its partners jointly published a toolkit to assist states and healthcare facilities in developing programs for public reporting of HAIs. SHEA and its partners co-sponsored the 2nd Annual Seasonal and Pandemic Influenza meeting in February 2007.

Update by the Electronic Health Records (EHR) Workgroup

Dr. Seven Gordon, a HICPAC member and the EHR Workgroup Chair, announced that the workgroup distributed the draft viewpoint paper on “Utilizing EHRs for Infection Control” to HICPAC for review and comment. He led HICPAC in a review of the document.

The viewpoint paper does not serve as a comprehensive EHR guideline, endorsement of a particular platform, or a proscriptive road map for infection control and healthcare epidemiology. Instead, the viewpoint paper is intended to achieve the following objectives. A broad conceptual overview of modern EHRs is provided. A systematic approach to utilizing EHRs for healthcare epidemiology in the areas of surveillance, reporting and interventions is presented. Examples are given for ICPs to develop a toolkit to leverage EHRs in the current climate of public reporting and outcomes.

Three key themes are highlighted in the viewpoint paper. The healthcare community is currently in between paper and electronic formats. Examples in the peer-reviewed literature that specifically address EHR HAIs are limited. The shift to EHRs should focus on awareness, adoption and advocacy.

The viewpoint paper also discusses the potential for institutions and repositories to use the BioSense platform and messaging standards for public reporting. The critical importance of basing EHR decisions on solid data and standardized, equivalent and uniformly collected measures is emphasized.

The viewpoint paper is organized in eight major sections:

- A background section with emphasis on public safety, pay-for-performance and public reporting.
- Information on leveraging EHRs to enhance quality of care, including infection control.
- The paradigm shift from traditional surveillance to EHR-supported surveillance.
- Use of worldwide web and health information technologies.
- Active roles for healthcare epidemiologists and practitioners in EHR.
- Challenges and opportunities for EHRs.
- Conclusions.
- Glossary.

Dr. Gordon asked the HICPAC members to submit written comments on the viewpoint paper to the workgroup's consultant, Dr. Ashish Atreja, at atrejaa@ccf.org by April 1, 2007. The workgroup would revise the draft based on HICPAC's comments and distribute the second version in May 2007. The workgroup would then revise the second draft and present the final version during the June 2007 HICPAC meeting.

Dr. Engel advised the workgroup to provide examples of using administrative databases for monitoring infections with the new "present on admission" (POA) indicator.

Update on the Prevention EpiCenter Program

Dr. John Jernigan, of DHQP, covered the following areas in his update. DHQP initiated the EpiCenters in 1997 to directly collaborate with academic partners in addressing important scientific questions regarding the prevention of HAIs, antibiotic resistance and other healthcare-associated adverse events. DHQP selects new EpiCenters every five years based on a peer-reviewed application process. The current cycle of EpiCenters investigators and their institutions represent >50 affiliated hospitals and healthcare plans throughout the country.

The 2006 program announcement required applicants to respond to three key objectives. Direct or surrogate markers for HAIs and processes of care that are closely linked to HAIs through automated retrieval, processing and analysis of data from EHRs or other electronic information systems used by healthcare institutions would be identified and validated. Interventions or prevention programs in various healthcare settings that result in sustained reductions in HAIs and other adverse events would be identified and validated. Quantitative estimates of the economic impact of interventions and prevention programs would be developed.

Initial research projects developed by the current cycle of EpiCenters are focusing on innovative measurement strategies. These activities are designed to meet measurement

needs driven by public reporting legislation, consumer demand, CMS, and the need to better utilize electronic data to reduce the burden of data collection. Current EpiCenter studies that are using EHRs to support surveillance and prevention efforts are summarized below.

Two objectives were established for the study on automated detection of BSIs. Reliable and accurate algorithms that permit the use of electronic hospital information systems to estimate rates of BSIs due to central venous catheters will be established. The feasibility and acceptability of using computer algorithms as a surrogate for manual surveillance methods will be determined.

To achieve these objectives, performance characteristics of multiple detection algorithms using data from multiple institutions will be compared to standard surveillance methodologies. Automated electronic and manual surveillance will be initially compared for intensive care units. This protocol will be refined based on results from the comparisons. A separate protocol will be developed for reassessment of general medial and surgical wards.

One objective was established for the study on automated detection of *C. difficile*-associated disease (CDAD). Performance characteristics of different surveillance methods will be defined to identify patients with CDAD and severe CDAD. To achieve this objective, ICD-9 discharge codes or electronic microbiology reports will be used. CDAD rates with these methods will be compared to CDAD rates with traditional infection control surveillance methods.

Three objectives were established for the study on the feasibility, validation and assessment of differences in electronic measures of hospital antimicrobial utilization. The feasibility of collecting, cleaning and programming computerized antimicrobial utilization data across multiple centers will be determined. The results will be validated by comparing the outcomes to gold standard sources, such as chart reviews and direct observation. Variation in antimicrobial utilization will be measured among physicians, physician groups and patient care units within participating hospitals.

Two objectives were established for the study on the use of Medicare claims data to identify hospitals with high SSI rates following cardiac surgery. Existing automated claims data from both inpatients and outpatients will be used to characterize SSI rates of hospitals. These data were previously validated and used to rank Massachusetts hospitals by SSI rates following cardiac surgery. The EpiCenters are partnering with CMS to apply claims-based algorithms to national claims databases to detect indicators of high SSI rates following cardiac surgery. The data will be validated by comparing claims-based assessments with a medical record review in a sample of hospitals.

One objective was established for the study on alternative inpatient SSI surveillance. Surrogate inpatient surveillance measures will be developed following several Surgical Care Improvement Project (SCIP) procedures: hysterectomy, total knee arthroplasty, vascular

surgery and colon surgery. The study will use a clearly defined, efficient and sensitive case finding approach. To achieve this objective, algorithms will be developed that use quantitative antibiotic exposures or procedure codes to identify SSIs and patients who need chart review. These data were validated in a previous EpiCenter study for breast surgeries and coronary artery bypass grafts. The study is now being expanded to include total knee arthroplasty and hysterectomies.

Two objectives were established for the study on the reduction of prolonged use of urinary catheters. An algorithm will be developed to electronically identify and flag patients who may no longer need urinary catheters. The algorithm will be validated and used in an intervention to reduce unnecessary catheter use.

Dr. Jernigan provided additional information on the EpiCenter studies in response to HICPAC's specific questions and comments. The EpiCenters are expected to produce algorithms with defined performance characteristics over the next few months. The CMS claims data and other algorithms will not be ready for widespread dissemination at that time, but some algorithms will be suitable for use in new inpatient surveillance strategies. The EpiCenter investigators have designed the studies to collect HAI rates by age, race and gender. The EpiCenter investigators are exploring the possibility of developing algorithms for VAP in the future.

Update on National Quality Forum (NQF) Activities

Ms. Marilyn Francis, Vice President of NQF, provided HICPAC with a briefing on NQF's current activities. In February 2006, NQF launched a project to develop national voluntary consensus standards for reporting HAI data. NQF formed six technical advisory panels (TAPs) to analyze the technical aspects of performance measures for BSIs, UTIs, ventilator-associated infections, pediatric infections, SSIs, and reporting and implementation.

NQF also formed a Steering Committee to evaluate the TAP recommendations and review performance measures from a political perspective. During a meeting in January 2007, the Steering Committee made recommendations on performance measures that should be moved forward. However, performance measures the Steering Committee did recommend will also be released for public comment. NQF is aware that the Steering Committee recommendations could be overturned during the public comment period.

Ms. Francis summarized key outcomes from the TAP and Steering Committee deliberations. The VAP TAP extensively discussed strategies to revise definitions for VAP and hospital-acquired pneumonia to minimize clinical judgment and develop a more objective assessment to increase the accountability of these measures.

The Steering Committee did not recommend VAP as a measure, but the VAP measure was strongly supported by the public and was also endorsed by two other projects. As a result, the NQF Board will take another vote on the VAP measure during its voting process. The Steering Committee also advised NQF to convene a pneumonia summit. NQF is currently attempting to leverage funds to hold the summit to reach agreement on definitions for VAP and healthcare-associated pneumonia and make progress on these measures.

The SSI TAP did not recommend CDC's measure for SSIs because the definition was found to be broad with superficial infections. The TAP also noted that SSIs are identified during admission where the procedure was performed. As a result, the TAP advised NQF to use a subset that matched the SCIP measure for SSIs. The TAP pointed out that these procedures would more strongly resonate with consumers.

For public reporting and comparative purposes, NQF asked CDC to consider the TAP's recommended approach of reporting only on SCIP measures rather than the full range of measures. NQF also informed CDC that SCIP measures on antibiotic prophylaxis would provide more details on prevention and outcomes if the definition was used as a subset.

The Catheter-Associated UTI TAP did not recommend a rate measure, but the members made several recommendations to revise the definition. The TAP noted that the definition had not been updated since the 1980s.

The Pediatric TAP made several research recommendations because no solid evidence supported the current age cutoffs in the definitions. The TAP also pointed out that some measures of infections were not specified for pediatrics. At this time, CMS is reviewing the SCIP measures to re-specify these definitions for pediatrics and the Child Health Corporation of America is reviewing SSIs and other measures to determine specifications for pediatrics.

The Reporting and Implementation TAP emphasized the need for institutions to make progress on using electronic surveillance as a tool to identify infections early, promote consistency in data collection, and increase capacity to compare infections across institutions. The Steering Committee advised NQF to convene a meeting to discuss electronic surveillance methods and determine whether vendors would have an interest in NQF reviewing their surveillance technologies. In response to this recommendation, NQF will launch an electronic surveillance project to identify methodologies or principles that could be endorsed. The NQF Board will discuss the appropriateness of NQF endorsing a particular software or algorithm without a specific product name.

Ms. Francis requested HICPAC's assistance in the following areas:

- Defining VAP and healthcare-associated pneumonia.
- Defining approaches to take action on research projects recommended by the TAPs.

- Identifying experts for the pneumonia summit.
- Providing guidance on areas of science to address during the pneumonia summit.
- Determining the feasibility of institutions of all sizes and types with ventilators or where pneumonia is an issue in implementing definitions for VAP and healthcare-associated pneumonia
- Identifying existing projects that could be expanded.

Ms. Francis concluded her briefing by describing NQF's next steps. NQF expects to complete the draft national voluntary consensus standards for the reporting of HAI data in February 2007 and release the document for a 30-day public comment period in March 2007. NQF will revise the draft standards based on public comments and release the second version for an additional 14-day public comment period if necessary.

All six TAPs proposed extensive research agendas. All of these research recommendations will be released for public comment and fully detailed in NQF's published report. All public comments will be posted online for the public to review. NQF hopes to present the final standards to the Board in May 2007 to initiate the 30-day voting process, but this timeline will depend upon the number of substantive public comments submitted. NQF will reconvene the TAPs or Steering Committee by conference call if the public comments contain new science or significant policy issues.

Dr. Pollock announced that in response to NQF's request for a subset definition, CDC and CMS are discussing potential strategies to align the National Healthcare Safety Network (NHSN) and SCIP measures.

Dr. Brennan confirmed that on the following day during the voting session, HICPAC would discuss and make a decision on Ms. Francis' request for guidance. He raised the possibility of the EHR Workgroup providing NQF with the final viewpoint paper to support NQF's new electronic surveillance project.

Update on State Reporting of HAIs

Dr. Monina Kleven, of DHQP, reported that as of February 13, 2007, 16 states enacted legislation on reporting of HAIs, 16 had activity in 2006, seven had study bills, and two are currently discussing legislation. In February 2007, 458 hospitals and 33 dialysis centers were enrolled in NHSN. Of these institutions, 44% had 201-500 beds, 80% were general acute care hospitals, and 39% were non-major teaching hospitals. The 398 institutions that actively report data to NHSN reported 259,000 events.

An American Hospital Association survey showed broad participation and representation of hospitals enrolled in NHSN. CDC provided assistance to several state health departments

that elected to use NHSN for mandatory reporting of HAIs. The enrollment of 200 facilities in New York was completed in January 2007. The enrollment of eight facilities in Vermont was completed in January 2007.

The enrollment of 60 facilities in South Carolina will be completed in March 2007. The enrollment of 80 facilities in Colorado will be completed in May 2007. The enrollment of 75 facilities in Tennessee will be completed in June 2007. The enrollment of ~25 facilities in Oklahoma will be completed in the fall of 2007. The enrollment of 150 facilities in Virginia will be completed in 2008.

CDC conducted several activities to support state health departments that are implementing mandatory reporting. Collaborative efforts were undertaken with the Council of State and Territorial Epidemiologists. An NHSN State User Group was formed with the seven enrolled states. The group convenes monthly conference calls to share experiences and lessons learned. A web board was developed for the group to share training materials, useful legislation and other relevant documents. Case studies are provided to the group to assist in training. Training is provided to all members through web-based seminars and demonstration applications of NHSN.

CDC identified several research needs to refine state reporting of HAIs. No conceptual model for studies has been developed to evaluate the impact of mandatory reporting on rates, practices, consumers and providers. Methods have not been defined to use supplemental data from other sources, such as retrospective data and electronic data. Dr. Klevens asked HICPAC to assist CDC in identifying strategies to fill these research needs.

Several HICPAC members suggested actions that could be taken to advance state reporting of HAIs.

- CDC should conduct studies to determine the accuracy of HAI data reported to NHSN and identify state costs in collecting HAI data. CDC could perform this research by administering a focused survey to the NHSN State User Group.
- HICPAC should recommend that states with mandatory public reporting also require accurate reporting of surveillance methods.
- CDC should conduct a meta-analysis of risk adjustment methods in various states.
- HICPAC should publish a follow-up document to highlight key outcomes among states one year after the release of the public reporting document.

With no further discussion or business brought before HICPAC, Dr. Brennan recessed the meeting at 5:13 p.m. on February 15, 2007.

Update on Public Reporting Legislation

Dr. Brennan reconvened the HICPAC meeting at 9:05 a.m. on February 16, 2007 and yielded the floor to the first presenter.

Dr. Stephen Jencks, the CMS *ex-officio* member, joined the meeting by conference call. He and Dr. Chesley Richards, of DHQP, briefed HICPAC on recent public reporting legislation. CMS is considering the possibility of placing MRSA in the ninth scope of work of its quality improvement organization (QIO) program for possible implementation in August 2008. Due to the significant amount of resources that will be required, however, CMS is uncertain about its ability to actually include MRSA in the QIO program. GAO is currently holding entry meetings with HHS agencies in preparation of its formal inquiry on HAIs.

Implementation of new Medicare legislation proposed by Congress would require the HHS Secretary to identify two preventable conditions that would serve as targets for non-payment of extra payments for co-morbidities or complications in diagnosis-related groups (DRGs). The DRGs contain ~3,000 HAIs and other diagnoses that would qualify as co-morbidities or complications. The proposed rule is expected to be released for public comment in ~2 months. The regulation would enhance specific infections, but coding would present a significant limitation even with the provision that the POA modifier could be collected. In response to specific language in the proposed legislation, CMS is seeking consultation from CDC.

Several measures are being considered for the hospital pay-for-performance proposal that might be implemented in FY'09 pending Congressional approval. CMS held a public listening session on the proposal and will convene a follow-up session over the next few weeks. HICPAC should view the CMS web site to obtain the date and time of the follow-up listening session because HICPAC's input to CMS on the proposal would be extremely valuable.

CMS launched a patient instrument to support SCIP. CMS hopes that various SCIP measures will be included in the pay-for-performance model. Several SCIP measures are now included in data that hospitals must publicly report to be eligible for a full payment update. CMS announced its intention to take this approach in fall 2006.

Dr. Brennan announced that following the previous meeting, he volunteered to serve as the HICPAC liaison to CMS's discharge planning initiative. He and Dr. Jencks recently met to discuss issues related to hospital readmission and would make a presentation to HICPAC in the near future. Dr. Brennan asked Dr. Jencks to provide HICPAC with guidance on surveillance definitions for infections in home care.

Report on Congressional Briefings on HAIs

Dr. Cardo reported that CDC was asked to give two briefings to Congress following the previous HICPAC meeting. The first briefing focused on CDC's collaborations with CMS, NIH and other groups on HAIs. Congressional staff questioned whether JCAHO's adoption of CDC's guideline on influenza vaccination of HCWs would serve as an appropriate model for HAIs.

Congressional staff asked CDC, CMS and JCAHO to perform preliminary research to address this issue. Congressional staff also sent a letter to GAO requesting an investigation of partnerships among HHS agencies in detecting and preventing HAIs and specific roles and responsibilities of each agency in this effort. In response to the letter, GAO contacted CDC, CMS, AHRQ and NIH to obtain answers to four questions:

- What are HHS's requirements and guidelines to prevent HAIs and what approaches do the agencies take to implement these recommendations?
- What methods are used for selected public incident reporting systems to collect, analyze and disseminate information about HAIs?
- What approaches are taken by public and private entities to prevent or reduce HAIs?
- What existing federal activities could the agencies enhance to prevent or reduce HAIs based on the experience of public and private entities?

In response to the GAO inquiry, CDC and CMS held an entrance conference call the previous week, while CDC and AHRQ would convene an entrance conference call later in the day. Following the CDC/CMS entrance conference call, additional questions were raised about the roles of the two agencies in reducing or preventing HAIs:

- Which agency has an oversight role?
- What specific programs or activities do the agencies conduct?
- What is HICPAC's responsibilities in addressing HAIs?
- What activities have HICPAC conducted regarding HAIs?
- What are CDC's approaches to implement or disseminate HICPAC guidelines or specific recommendations?
- What is NHSN and its data dictionary?
- What is the extent of CDC's participation in other public or private committees to reduce or prevent HAIs?

Dr. Cardo reported that the second Congressional briefing focused on HICPAC's guideline on the prevention of MRSA. Congressional staff asked CDC to describe its rationale for not recommending universal screening for all hospitals in the United States. CDC will collaborate with professional organizations to educate Congress and the public about strategies that can be implemented to prevent MRSA and other HAIs.

Dr. Cardo proposed several options for HICPAC to participate in educating Congress, legislators, the media and general public about HAIs. HICPAC could meet with HHS and Dr. Julie Gerberding, the CDC Director, to discuss its future role and direction in educational efforts related to HAIs. The GAO investigation on HAIs could serve as the impetus for requesting these meetings. HICPAC could participate in an HAI media campaign.

To assist HICPAC in determining its mission, future priorities, vision and goals, Dr. Cardo confirmed that DHQP would present its strategic plan during a conference call prior to the next meeting. She would also determine whether the collective HICPAC membership could meet with Congressional staff to discuss this issue.

Several HICPAC members suggested steps that should be taken in an action plan to educate Congress, the media and public about HAIs. The members noted that the action plan should be developed and implemented as a joint effort by CDC, HICPAC, federal agencies, professional organizations, and infection control experts in the field.

- Talking points should be crafted and provided to various professional societies to ensure that the same evidence-based messages about HAIs are communicated to the media, public, insurers, employers and other target audiences. For example, the talking points could be used to clarify that “zero tolerance” refers to 100% compliance with infection control practices guidelines rather than zero HAIs. Persons with expertise in risk communications and social marketing should be engaged in this effort.
- A joint press release should be issued about HAIs. For example, the press release could be used to educate the public about the critical role of hand hygiene in reducing or preventing HAIs.
- HHS should be formally advised about the need for HICPAC and its partners to play a stronger role in educating the public about HAIs.
- A simple infection prevention fact sheet should be developed and distributed to the public, such as “Things You Need To Know When You Go Into a Healthcare Setting to Protect Yourself and Help Us Protect You.”
- A document should be created and disseminated highlighting key successes in infection control interventions over the past 40 years.
- CDC’s “Get Smart: Know When Antibiotics Work” campaign should be used as a model in launching an evidence-based campaign on HAI issues, including hand hygiene and questions for patients to ask physicians prior to surgery.
- A list of difficult questions the media typically asks about HAIs and appropriate responses to these issues should be developed and widely circulated to professional organizations. This approach would facilitate delivery of uniform and consistent messages at the national level.
- CDC should use its legislative office to create opportunities for HICPAC to be more proactive in educating Congress, the media and public about HAIs.

- The next HICPAC meeting should be held in Washington, DC to ensure greater participation by HHS, Congressional staff and professional organizations.
- A HICPAC statement should be recorded by the press at the National Press Club session during “National Infection Prevention Week” in October 2007. The statement should clearly outline HICPAC’s role, partnerships and national priorities in healthcare infection control practices.
- HICPAC should set aside an entire day during the next meeting to develop a strategic plan that clearly outlines its goals over the next three years.

HICPAC Voting Session

Dr. Brennan led HICPAC in a review of agenda items from the previous day that would require a formal vote.

Issue 1. A motion was properly placed on the floor and seconded by Drs. Smith and Ramsey, respectively, for HICPAC to adopt the revision and completion of APIC’s draft surveillance definitions for home care as a formal project. **HICPAC unanimously approved the motion.**

HICPAC agreed on the following process to conduct this activity. A new Home Care Definition Workgroup was formed with Mr. Olmsted and Drs. Singh, Smith and Stevenson representing HICPAC; Ms. Teresa Horan representing DHQP; and Ms. Bjerke and two original authors of the definitions representing APIC.

HICPAC made three suggestions for the workgroup to consider. The scope of and criteria for “home care” should be clearly defined in the definitions. The purpose of the definitions should be outlined to promote better reporting, continuity and integration between home care and inpatient definitions. A set of surveillance definitions for home care should be developed that can be incorporated into NHSN.

The workgroup would distribute the next draft by the end of May 2007 to allow the document to be discussed during the June 2007 meetings of HICPAC and the APIC Home Health Group. APIC would continue to lead the effort in finalizing the definitions. Ms. Bjerke would inform APIC of HICPAC’s unanimous recommendation to revise and complete the draft definitions. She would coordinate arrangements to convene the workgroup and would also provide HICPAC with regular progress reports.

Issue 2. A motion was properly placed on the floor and seconded by Dr. Pegues and Mr. Olmsted, respectively, for HICPAC to use the new rapid cycle approach to develop a new guideline on norovirus prevention in healthcare facilities and update the existing UTI guideline in a parallel effort. **HICPAC unanimously approved the motion.**

HICPAC agreed on the following process to conduct this activity. Two new workgroups were formed: (1) Dr. McCarter, Mr. Olmsted, Dr. Pegues and Ms. Soule would update the UTI guideline and (2) Drs. Ramsey, Stevenson, John Boyce and other outside experts would develop the new norovirus guideline. Dr. Pegues would serve as the primary point of contact to DHQP for the revised UTI guideline and Dr. Brennan would identify a HICPAC member to serve as the primary point of contact for the new norovirus guideline.

DHQP would provide sufficient staff to support HICPAC's efforts in developing the new norovirus guideline and updating the UTI guideline in a parallel rather than a sequenced format. The workgroups would clearly define specific issues to address in the guidelines up front, but each HICPAC member would particularly review the UTI guideline and provide the workgroup with potential questions to answer. Both the UTI and norovirus workgroups would review the World Health Organization's antiviral guideline on pandemic influenza as a model in identifying specific questions to address in a guideline.

Dr. Brennan would coordinate efforts with DHQP and CEP staff to support the development of the new norovirus guideline and revision of the UTI guideline. Dr. Brennan would also contact Ms. Jennifer Padberg, Director of IDSA Clinical Affairs, to ensure that the UTI guidelines of both groups were integrated and contained consistent messages. The IDSA catheter-associated UTI guideline is scheduled for publication in the spring of 2008.

Dr. Dellinger would convey HICPAC's interest in participating in NQF's ongoing efforts to develop guidance on antimicrobial prophylaxis and SSIs. If NQF engaged HICPAC in the Prophylactic Antibiotic Workgroup, Dr. Singh would represent HICPAC for pediatric issues related to SSIs and Dr. Gordon would represent HICPAC for adult issues related to SSIs.

HICPAC generally agreed that based on the success of the new rapid cycle approach in developing the norovirus guideline and updating the UTI guideline, revisions of the SSI and catheter-associated BSI guidelines would be considered as the next guidelines with this process.

Issue 3. HICPAC extensively discussed NQF's request for guidance on revising the VAP definition for the purposes of public reporting. None of the members supported HICPAC's participation in this activity without NHSN's involvement, endorsement and prior validation of the definition before the application of its use.

A motion was properly placed on the floor and seconded by Drs. Pegues and Ramsey, respectively, for HICPAC to endorse a critical validation of different definitions for VAP as a priority item for future research. **HICPAC unanimously approved the motion.**

Dr. Brennan would inform Ms. Francis of HICPAC's unanimous recommendation.

HICPAC Business

Dr. Brennan led HICPAC in a review of the business items that were raised over the course of the meeting.

- The final draft of the EHR viewpoint paper would be placed on the June 2007 agenda for HICPAC's further review, discussion and formal approval.
- HICPAC would take several actions to participate in the strategic planning process for HAIs: (1) serve as an expert spokesperson on this issue; (2) update the HICPAC web site with more information on HAIs; and (3) convene a future meeting in Washington, DC to share information with Congressional staff and legislators in either an official or unofficial capacity depending on HICPAC's restrictions as a federal advisory committee.
- Dr. Brennan would provide each HICPAC member with the following materials: (1) Dr. Bell's presentation on infection prevention guidelines and (2) CDC's 1996 guidelines on improving the quality of guidelines.
- Dr. Brennan and DHQP would convene the first conference call of the new Home Care Definition Workgroup.
- Dr. Brennan and DHQP would hold a conference call with the entire HICPAC membership and co-chairs of the SHEA/IDSA Task Force on HAIs to discuss the task force's plans to develop a guideline with both process and outcome measures for HAIs.
- DHQP would convene a conference call with the entire HICPAC membership prior to the June 2007 meeting to discuss DHQP's strategic plan.
- DHQP would make logistical arrangements to hold either the June 2007 or October 2007 HICPAC meeting in Washington, DC.
- HICPAC would participate in the National Press Club presentation in October 2007 during "Infection Control Week."
- Dr. Brennan would attempt to schedule a meeting with Dr. Gerberding to discuss HICPAC's future direction.
- Each HICPAC member would review the UTI guideline and provide the new workgroup with potential questions that should be addressed during the revision of the document.

The HICPAC members would take the following actions:

- Mr. Olmsted would assist with the home health definitions and UTI guideline.
- Ms. Soule would assist with the UTI guideline.
- Dr. Gordon would revise the draft EHR viewpoint paper based on HICPAC's comments and would communicate with Dr. Dellinger about HICPAC's potential participation in the Prophylactic Antibiotic Workgroup. He would represent HICPAC on the workgroup for adult issues related to SSIs.

- Dr. Singh would assist with the norovirus guideline and pediatric definitions for public reporting of HAIs. She would communicate with Dr. Dellinger about HICPAC's potential participation in the Prophylactic Antibiotic Workgroup. She would represent HICPAC on the workgroup for pediatric issues related to SSIs.
- Dr. Stevenson would assist with the home health definitions and the norovirus guideline. He would review and provide comments on the draft EHR viewpoint paper and the UTI guideline.
- Dr. Smith would assist with the home health definitions and would continue to represent HICPAC in the Department of Homeland Security's efforts to develop infection control capability under the Target Capability List. After a draft is prepared from this activity, he would circulate the document to each HICPAC member.
- Dr. McCarter would review and provide comments on the draft EHR viewpoint paper and would assist with the UTI guideline.
- Dr. Ramsey would assist with the norovirus guideline.
- Dr. Pegues would assist with the UTI guideline and would also serve as HICPAC's point of contact for the guideline to IDSA, CDC and other interested groups.
- Ms. Murphy would review and provide comments on the draft EHR viewpoint paper and the UTI guideline. She would also participate in HICPAC's strategic planning process.
- Dr. Dellinger would review and provide comments on the draft EHR viewpoint paper. He would also convey HICPAC's interest in participating in the multi-organizational Prophylactic Antibiotic Workgroup.

Closing Session

The dates of the next two HICPAC meetings are June 11-12, 2007 and November 12-13, 2007. With no further discussion or business brought before HICPAC, Dr. Brennan adjourned the meeting at 12:17 p.m. on February 16, 2007.

I hereby certify that to the best of my knowledge, the foregoing Minutes of the proceedings are accurate and complete.

Date

Patrick J. Brennan, M.D.
HICPAC Chair