

HIT Standards Committee - Implementation Workgroup  
Hearing on Implementation Starter Kit: Lessons & Resources to  
Accelerate Adoption  
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Presentation Material Prepared by:

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Michael J. Sauk has served as vice president and chief information officer for UW Hospital and Clinics, since August 2006. He has a proven track record in implementing complex information technology systems with an emphasis on quality performance, customer service and user satisfaction.

Prior to joining UW Hospital and Clinics, Sauk held the positions of senior vice president and chief information officer for the City of Hope National Medical Center in Duarte, California (1998-2006), and chief information officer for UCI Medical Center in Orange, California (1991-1998). From 1981-1991, he served as director of information services of Detroit Medical Center, and prior to that was director of data processing for Neuendorf Transportation of Madison.

Sauk is a member of the Healthcare Information and Management Systems Society (HIMSS) and the College of Healthcare Information Management Executives (CHIME), and served for three years on the Siemens Executive Advisory Team. He also serves on the Audit Committee of the UW Credit Union's Board of Directors. He holds a BA in communication from the University of Wisconsin-Madison and a master's degree in science administration from Central Michigan University.

## UNIVERSITY OF WISCONSIN HOSPITAL AND CLINICS

### Hospital Background and Statistics

**UW Hospital and Clinics is a 493-bed tertiary care hospital and regional referral center with major programs in organ transplant, heart and vascular care, cancer care, neurology and neurosurgery, pediatrics and orthopedics. It includes American Family Children's Hospital (AFCH), a 61-bed state-of-the-art pediatric facility located adjacent to the main hospital. The hospital's community clinic locations offer both primary and specialty care to patients throughout the Madison area.**

**The hospital is staffed by the UW Health faculty physicians of the UW Medical Foundation. In addition to pediatric care at AFCH, it offers cancer care in conjunction with the UW Carbone Cancer Center, and Level One trauma care for both adults and pediatric patients, including a verified burn center and UW Med Flight critical care air transport.**

**Operating since 1996 as a public authority, UW Hospital and Clinics is the largest non-governmental employer in Madison. It is both independent and non-profit and receives no state funding except Medicaid reimbursement.**

### National Awards and Recognitions

- Recipient of prestigious Magnet hospital designation by the American Nurses Credentialing Center, 2009.
- Ranked among the top 10 academic health centers nationwide in a University Health System Consortium benchmarking study of safety, mortality, clinical effectiveness and equity, 2009.
- Named #1 academic medical center nationwide for outstanding nursing quality by American Nurses Association, based on NDNQI performance, 2009.
- Ranked among the top 50 of the nation's hospitals in five medical specialties, *U.S. News & World Report*, "America's Best Hospitals 2009."
- Named among "100 Best Companies" in the nation by *Working Mother* magazine, 2009.
- Heart and Vascular Care program listed among "100 Top Hospitals" in Thomson Reuters *Cardiovascular Benchmarks for Success*, 2009.
- **Recipient of the American Heart Association's "Start! Fit-Friendly Company Gold Level Award" for creating physical activity programs in the workplace and encouraging the health of employees.**
- Named a *Get with the Guidelines* Gold Performance Achievement Award winner by the American Stroke Association, 2008.
- Selected as Best Hospital/Medical Center in Best of Wisconsin Business Awards, *Corporate Report Wisconsin*, 2006, 2008, 2009.
- Ranked among the nation's top 25 integrated health care networks by SDI's IHN 100, 2009 (formerly Verispan).
- Health Grades Excellence Award recipient for critical care, gastrointestinal care and pulmonary care, 2007, and cardiac care, 2008.
- **Consumer Choice Award winner, National Research Corporation, 2009.**
- **American Family Children's Hospital ranked second in the nation by KLAS for efficient use of electronic health record.**
- 2008 recipient of Premier Award for Quality (AFQ), one of 27 selected from 3,800 hospitals nationwide, based on excellence in clinical outcomes and resource use.

# MEANINGFUL USE

[1] Objective: Use of CPOE for orders (any type) directly entered by authorizing provider (for example, MD, DO, RN, PA, NP).

Measure: CPOE is used for at least 10 percent of all orders.

UW Hospital recent statistics re: this objective:

**Inpatient/ED/Surgical Services Combined:**

**Nov: 83.14%**

**Dec: 83.22%**

**Jan: 82.23%**

**Inpatient Only:**

**Nov: 85.56%**

**Dec: 85.69%**

**Jan: 85.35%**

**ED Only:**

**Nov: 82.80%**

**Dec: 82.20%**

**Jan: 81.02%**

[2] Objective: Implement drug-drug, drug-allergy, drug-formulary checks.

Measure: The eligible hospital has enabled this functionality.

UW Health uses Medi-Span to check drug-drug, drug-allergy and drug-formulary checks.

[3] Objective: Maintain an up-to-date problem list of current and active diagnoses based on ICD-9-CM or SNOMED CT.

Measure: At least 80 percent of all unique patients admitted to the eligible hospital have at least one entry or an indication of none recorded as structured data.

UW Hospital on primary care is around 90% compliance. UW Hospital is still working on the consistent updating of the problem list as a byproduct of daily inpatient physician note and the specialty clinics have just come live. UW Hospital does use ICD9 diagnoses.

[4] Hospital Objective: Maintain active medication list.

Measure: At least 80 percent of all unique patients admitted by the eligible hospital have at least one entry (or an indication of "none" if the patient is not currently prescribed any medication) recorded as structured data.

UW Hospital is in compliance.

[5] Objective: Maintain active medication allergy list.

Measure: At least 80 percent of all unique patients admitted to the eligible hospital have at least one entry (or an indication of "none" if the patient has no medication allergies) recorded as structured data.

UW Hospital is in compliance.

[6] Objective: Record demographics.

Measure: At least 80 percent of all unique patients admitted to the eligible hospital have demographics recorded as structured data.

UW Hospital is in compliance.

[7] Objective: Record and chart changes in vital signs.

Measure: For at least 80 percent of all unique patients age 2 and over admitted to the eligible hospital, record blood pressure and BMI; additionally, plot growth chart for children age 2 to 20.

**Blood pressure is recorded on 100% of our patients and BMI is calculated 100%. Plot growth charts are built and used widely in ambulatory**

[8] Objective: Record smoking status for patients 13 years old or older.

Measure: At least 80 percent of all unique patients 13 years old or older admitted to the eligible hospital have "smoking status" recorded.

UW Hospital is in compliance.

[9] Objective: Incorporate clinical lab-test results into EHR as structured data.

Measure: At least 50 percent of all clinical lab tests results ordered by an authorized provider of the eligible hospital during the EHR reporting period whose results are in either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.

The majority of our results are reported discretely or as structured data

[10] Objective: Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research and outreach.

Measure: Generate at least one report listing patients of the eligible hospital with a specific condition.

Examples:

Objective: Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research and outreach.

**List of patients qualified by age and diagnosis who have not received a given immunization**

**List of patients receiving an antibiotic agent and reviewing for adverse reactions**

**List of patients in restraints that list the medications they are on, their age, current diagnosis and length of time they have been in restraints**

Measure: Generate at least one report listing patients of the eligible hospital with a specific condition.

**List of patients and their blood sugar post cardiac surgery.**

**List of patients on a vent and the number of days on a vent**

**List of patients with a Foley catheter and the number of days the catheter has been in place**

[11] Objective: Report hospital quality measures to CMS or the states.

Measure: For 2011, an eligible hospital would provide the aggregate numerator and denominator through attestation as discussed in section II.A.3 of this proposed rule. For 2012, an eligible hospital would electronically submit the measures are discussed in section II.A.3. of this proposed rule.

**CMS is asking that we sign an attestation form (or through electronic means) reporting the aggregate numerators/denominators for the quality measures we are being asked to report. As CMS is unable to receive electronic submissions yet, they want some evidence that we are in compliance.**

**For example, for one of the proposed measures if we had 200 cases that qualified and we met the measure 100 times we would report 100/200 or 50%. CMS will undoubtedly push a report form out that we would complete. AHA is recommending that CMS wait until the EHR vendors develop the reporting capability for their clients.**

The core measure data is all available, but at this point is mostly a manual process of collecting. Mary Sue's team provides some of the data, but much of it involves reviewing the charts. The data requirements have been challenging (For example Heart Failure), since it's difficult to require documentation. We are working on answers for gaps, but I think Pneumonia core measure reporting is going well.

[12] Objective: Implement five clinical decision support rules relevant to specialty or high clinical priority, including for diagnostic test ordering, along with the ability to track compliance with those rules.

Measure: Implement five clinical decision support rules relevant to the clinical quality metrics the Eligible Hospital is responsible for as described further in section II.A.3.

#### **Examples of current clinical decision support rules:**

- 1. This patient has hemoglobin < 7.5. Consider decreasing the frequency of blood draws and communicating with the patient's nurse regarding the use of pediatric minimum volumes.**
- 2. This patient has hemoglobin < 9.0 and is currently on supplemental oxygen and/or mechanical ventilation. Consider decreasing the frequency of blood draws and communicating with the patient's nurse regarding the use of pediatric minimum volumes.**
- 3. Upon ordering INFLUENZA A AND B DETECTION lab, an alert to place the patient in Enhanced Droplet Isolation. Message says, "patient is at risk for H1N1, Please also order the following:"**
- 4. This is an unexpected PEWS score. Please complete the PEWS SmartText documentation. (Peds Early Warning is a calculated score based on completion of a flow sheet)**
- 5. This patient has an MRSA infection and is not currently in isolation. Please place an isolation order for this patient before continuing.  
- We also have VRE infection and Burkholderia infection ones as well.**
- 6. A transfusion reaction has been documented. Place the following orders and ensure the steps outlined in the Transfusion Navigator are completed.**
- 7. Order defaults to pediatric dosing based on patient weight <40kg**
- 8. Order defaults to adult dosing based on patient weight > or = 40kg**

**9. Allergies have not been reviewed on this patient. Please review allergies before placing medication orders.**

**10. This medication is possibly being administered too close to the previous PRN dose administered.**

**11. When attempting to order both ABI and PVR: NOTE: Please pick only one of these orders. #1 - ABI (ankle brachial index) = ankle, transmet, digit levels include ankle pressure and PVR waveforms; #2 - PVR (pulse volume recording) = multi level includes full extremity (thigh, calf, ankle) pressures and PVR waveforms.**

**12. Total score for Hendrich Fall Risk Assessment suggests patient is at risk for falls. Please confirm whether the patient is at high risk by valuing the Fall Risk Confirmation row.**

[13] Objective: Check insurance eligibility electronically from public and private payers.

Measure: Insurance eligibility checked electronically for at least 80 percent of all unique patients admitted to an eligible hospital.

UW Health insurance eligibility is checked on more than 80% of unique patients.

[14] Objective: Submit claims electronically to public and private payers.

Measure: At least 80 percent of all claims filed electronically by the EP or the eligible hospital

UW Hospital ranges between 87% and 93% compliance.

[15] Objective: Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, allergies, discharge summary and procedures) upon request.

Measure: At least 80 percent of all patients who request an electronic copy of their health information are provided it within 48 hours.

UW Hospital is going live with the ability to provide an encrypted CD of their medical record by the end of March, 2010.

[16] Objective: Provide patients with an electronic copy of their discharge instructions and procedures at time of discharge, upon request.

Measure: At least 80 percent of all patients who are discharged from an eligible hospital and who request an electronic copy of their discharge instructions and procedures are provided it.

UW Hospital does this for all discharged inpatients.

[17] Eligible Hospital Objective: Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, allergies, diagnostic test results) among providers of care and patient authorized entities electronically.

Measure: Perform at least one test of certified EHR technology's capacity to electronically exchange key clinical information.

UW Hospital is going live with the exchange of clinical data between Dane County healthcare entities using the EPIC product, Care EPIC which uses the CCD (Continuity of Care Document/ HL7 XML standard that is generally accepted as the foundational content standard for health information exchange.

[18] Objective: Perform medication reconciliation at relevant encounters and each transition of care.  
Measure: Perform medication reconciliation for at least 80 percent of relevant encounters and transitions of care.

UW Hospital is in compliance.

[19] Objective: Provide summary care record for each transition of care and referral.  
Measure: Provide summary of care record for at least 80 percent of transitions of care and referrals.

UW Hospital is in compliance.

[20] Objective: Capability to submit electronic data to immunization registries and actual submission where required and accepted.  
Measure: Perform at least one test of certified EHR technology's capacity to submit electronic data to immunization registries.

**UW Hospital has transmitted immunizations to WIR (Wisconsin Immunization Registry) on a weekly batch basis for years**

[21] Objective: Capability to provide electronic submission of reportable lab results to public health agencies and actual submission where it can be received.  
Measure: Perform at least one test of certified EHR technology capacity to provide electronic submission of reportable lab results to public health agencies (unless none of the public health agencies to which eligible hospital submits such information have the capacity to receive the information electronically).

UW Hospital has signed an agreement with the State of Wisconsin about using WEDSS but Infection Control has not actually utilized this system - until WEDSS develops the capability to capture some of the patient data through the use of an interface. Currently, we fill out a form and fax to public health for reportable diseases. Information on: <http://dhs.wisconsin.gov/wiphin/WEDSS.htm>

[22] Objective: Capability to provide electronic Syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.

Measure: Perform at least one test of certified EHR technology's capacity to provide electronic Syndromic surveillance data to public health agencies (unless none of the public health agencies to which an eligible hospital submits such information have the capacity to receive the information electronically).

**The Madison Area Review of Systems Integrated Syndromic Surveillance Application has been developed by researchers at the University of Wisconsin Division of Emergency Medicine to explore novel data streams and analytical methods for Syndromic surveillance. Syndromic surveillance has been shown to be an useful adjunct to public health surveillance and may provide 1-2 weeks advanced warning of infectious disease outbreaks in a community. Our system extracts a limited data set from our emergency department electronic health record consisting of patient encounter date, time, age, zip code, chief complaint, ICD-9 discharge diagnosis, vital signs and review of systems data. Data is grouped into syndromes such as Influenza-Like-Illness, Respiratory and Fever. Analytical methods are used to determine if there is an aberrant rise in activity within these syndromes. Alerts to aberrant activity are disseminated via email. During the 2009 influenza pandemic our system was modified to send alerts to hospital infectious disease, emergency department clinical administration and public health. Retrospectively, our system alerted 12 days before a rise in laboratory confirmed pandemic influenza in our community.**

[23] Objective: Protect electronic health information maintained using certified EHR technology through the implementation of appropriate technical capabilities.  
Measure: Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308 (a) (1) and implement security updates as necessary.

UW Hospital will finish the encryption of all laptop C drives by March 15, 2010 and we are re-emphasizing the requirement to use encrypted thumb drives having already distributed more than 500. We are also re-validating our disaster recovery plan by March 31, 2010 including exercises. UW Hospital with its EPIC system has a real-time backup with synched production data locate in a data center 5 miles from the main data center. UW Hospital is a very systematic daily backup of all PHI and it is stored off-site. UW Hospital is having an independent risk analysis performed in July, 2010 and will act on any other recommendations.