



A Quest for Consensus in Documentation - Prelude to an Epic Journey.....

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**BRIGHAM AND
WOMEN'S HOSPITAL**

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Overview

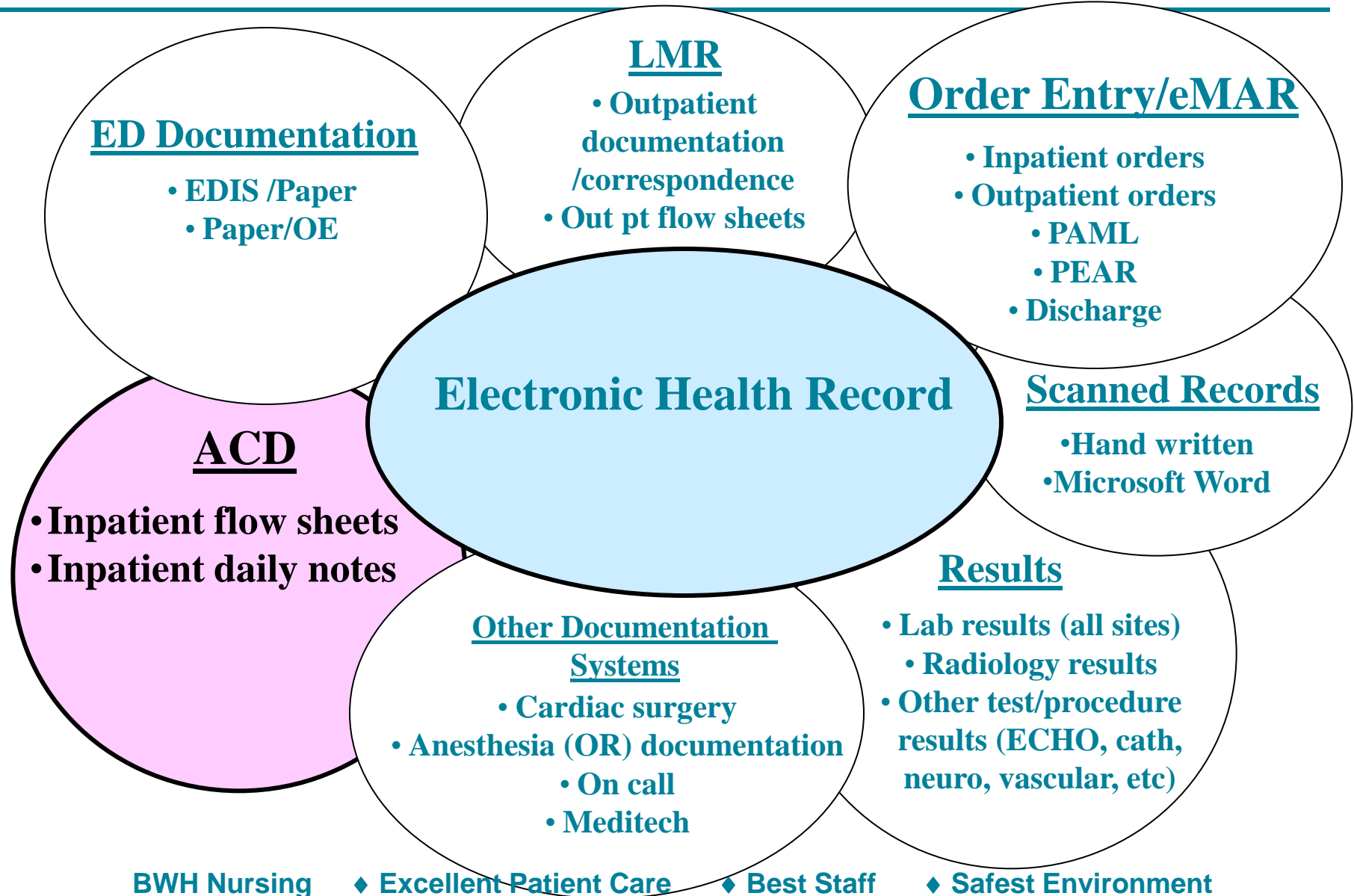
- ◇ Current state
- ◇ Project Vision & Guiding Principles
- ◇ Standardization (Why, What, How)
- ◇ Case Study: Nursing Assessment
- ◇ What did we accomplish?
- ◇ What did we learn?
- ◇ What's next?

The Acute Care Documentation (ACD) Project

- ◇ Design, development and implementation of an electronic inpatient documentation system across **two Academic Medical Centers!**
- ◇ This was to be a *Documentation Merger!*
- ◇ Scope
 - Inpatient flow sheets
 - Inpatient notes
 - A “few” points of integration



Our (Complicated) Electronic Health Record



Current State: How we document today...

DATE: 06/20/09

all soft 500
Eti all
Nurs no food elicit

3 vial med...
5 symptoms
kneeling up in my pants
HP no imm

in med...
mild HA low fever
no HIV P-RSS
vitals stable abd...
HCC...
neck soft
lung clear
GI AN
- soft s/s 517 all well
neuro all good
Kv vial mening
Litter

493

INTERDISCIPLINARY PROGRESS NOTES

Please sign, date & time each entry

5/21/09 Hancock SR prep note
prep 2 fentanyl pseudoephedrine
pseudoephedrine
100

Completely Illegible

305/32 11.31 9.7 225 200 24/0.5

UxR No acute process
EKG TWFM VS, up
UA: neg, trace blood
Blood! clot active
Kv PRB? + 2u FFP M
metformin

NIDDM

Triage Note: 5/20 40 y/o ♀ 4/10 delirious & ↓ appetite x 3 days
Abd pain

Signature: [Signature] RN ID # [ID]

Signature: [Signature] RN ID # [ID]

currently receiving care from Pharmacy & ...

BWH Patient Pre-admission Medication List

Patient presently not taking any medications

Medication Name (please note if the medication is long acting, e.g. XL, SR)	Dose / Strength	Amount / Frequency	Route	Last Dose
Furosemide	30mg OD			
Diphenhydramine	0.125g QOD			
Metoprolol SR	100mg BID			
Simvastatin	20mg HS			
Warfarin	3mg alternating c 2mg			ENR Q3WKS

General Overview / PMH / PSY / Social History

Schizophrenia, 2004
Bipolar disorder

PMH / PSY
Chronic Schizophrenia
ENR 4x week, 4 AM, by ARB 2004
HTN
Diabetes
Allergies to latex, iodine, shellfish, penicillin

Social History

Client / Procedure List (write event code in progress section of chart)

5/21 517 Pseudoephedrine 100mg, done under general
100mg fentanyl, 0.3mg diazepam, 1gram vitamin D
Diazepam 10mg from failed A-liv attempt
100mg to Diazepam sub. 100mg pseudoephedrine
Vital signs: P 110, R 20, T 37.8, HR 110
Appetite, 2000 kcal

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 Best Staff ♦
 Safest Environment

How we document today...

A Teaching Affiliate of Harvard Medical School
75 Francis Street, Boston, Massachusetts 02115

INTERDISCIPLINARY PROGRESS NOTES

Please sign, date & time e

12:30 pm

6/19 Cardiac
Ph assess
Note di

T = 95.4° (po)


O ₂	97%	98%
RR	16	16
HR	72	70

Lying down

	L	R
BP	131/58	127/60
O ₂	97%	97%

Note/Vitals Written on Paper Towel and Placed in Chart

How we document today...

ID: 24h; Since MN: FS: Wt: Access:	02 RA R Elbow: Extremities: VWP, no c/c/e Neuro: AAOx0, CNII-X11 intact, motor/sensory intact	Penicillin G 2 million U IV Q4hrs Vancomycin 1g IV q12 hours (7/2-4) Ceftriaxone 1g IV qday (7/2-4) PRN: Oxycodone PRN pain Morphine IV PRN pain
		
<p>No Toner (Placed in Chart Anyway) Mix of Writing/Typing</p>		
Assessment: 60 year old M w/ Pkcs s.t. h/a/futter s/p of infection on Coamodin presenting with recurrent fevers and new R joint pain/wel... #5 Right joint- -Received 1 dose of Ceftriaxone in the Rheum clinic. Broadened to Ceftriaxone 2 gm IV plus Vancomycin 1g q12 hours. Narrowed to PCN G based on sensitivities. -PICC, hopefully today. DIC w/ 9 wacs ab x (will get final 10-ccs) -Rheum and ID following, appreciate advice and input. -Will rule out endocarditis (-) -hopefully Monday am, if notes out pt -Will rule out HIV, HCV, HB, Urine GC. Serum crypto and ASO titer (-) -Final blood Cx x 2, Urine for joint fluid Cx -> B hemolytic Group C strep from wound -Debrided in OR by ortho -formed purulent fluid. Ortho will follow for removal of drain and dressings. Drainage is getting dry. And follow advice and input. Plan for OT consult -Tylenol, morphine, and codeine same per Level 1 -PICC line hopefully placed Sunday in preparation for further antibiotics. If not, Monday #5 ChA futter -On Coamodin, will be going out patient + consent. -Will follow WRR #5 - - - - # -	ALT AST Micro: 7/2 Blood Cx x2 Pending NGTD 7/2 Urine Cx Pending 7/2 Joint aspirate Cx Pending B hemolytic pan-sensitive Group C strep x2 Serum crypto (-) ASO titer (-) Microbiology and others: Right Joint Xray: small effusion	PRN: Oxycodone PRN pain Morphine IV PRN pain Micro: 7/2 Blood Cx x2 Pending NGTD 7/2 Urine Cx Pending 7/2 Joint aspirate Cx Pending B hemolytic pan-sensitive Group C strep x2 Serum crypto (-) ASO titer (-) Microbiology and others: Right Joint Xray: small effusion Consultants: Ortho Infect

Nursing Documentation Current State

- ◆ More than 15 different flow sheets
 - 12 ICU
 - General care units, NICU, PACU, others

- ◆ Multiple nursing note types
 - Synthesis notes, problem oriented notes
 - Education notes, transfer notes, discharge notes
 - Handwritten, Microsoft word

ACD – The Vision

ACD Today



ACD Future

- Available to only one person at a time
- Difficult to read
- Repeated transcription of same data
- Difficult to abstract or reuse data

- Available from onsite and remote computers
- Legible
- Able to import data (vitals, labs, meds, demographics)
- Coded data fields feed other databases and reporting tools

ACD – The Vision

ACD Today



ACD Future

- High variability in clinical documentation workflow
- High variability in clinical documentation content
- No standardized nursing terminology

- Standardized workflow
- Standardized content
- Standardized nursing terminology

Why Standardize? Reduce Variability!

◆ **Improve quality of care**

- Support/facilitate clinical communication and continuity of care
- Facilitate/improve clinical outcomes measurement and management
- Provide foundation for computer generated clinical decision support/guidance

◆ **Improve care efficiency and cost management**

- Decrease (or more effective) documentation time
- Online access to clinical data (save time looking for paper chart)
- Support retrieval and reuse of data (eliminate redundant data capture/entry)
- Support structured data capture (eliminate manual chart review)
- Improved legibility

◆ **Improve/facilitate regulatory compliance**

- Thoughtful use of required documentation fields

◆ **Progress towards a single, electronic patient record**

ACD Guiding Principles

- ◆ **Reusable data:** Entered once; used many times
- ◆ **Integrated approach:** We will not create silos of information
- ◆ **Intuitive User Interface**
 - Clinical data is presented in a comprehensive view
 - Ability to easily navigate to other applications (eMAR/OE)
- ◆ **Easy access:** To critical patient data for all care providers
- ◆ **Reduce documentation challenges and improve workflow**
 - Short term workflow disruption is to be expected.

This effort was different!

◆ Collaboration between two AMCs

- Goal was to have the entire system be the same across two AMCs
- The culture, workflow, policies, decision making bodies are different

◆ Multi-disciplinary

- Involved MD/PAs, Nurses, Health Professionals, Social Workers and representatives from areas such as HIS, Bio-Med, Quality

◆ Decision-making was grass roots

- Many **Key** decisions were made by bedside clinicians as opposed to executives/leaders

◆ Process change would be felt throughout *all* inpatient areas



Joint ACD Committees

◆ **Steering and Business Owner Committee**

- Executive and Operational leaders of the project

◆ **Clinical Content Governance Committee**

- Review content and functionality
- Make final decisions around content standardization

◆ **Nursing Documentation Committee**

- Reviews decisions made in above meetings
- Provides feedback and recommendations as appropriate

◆ **eMAR Integration Work Group**

- Multidisciplinary team from nursing, pharmacy and IS
- Make final decisions around functionality and work flow changes

Site Specific Nursing ACD Workgroups

◆ **Nursing Documentation Work Group**

- Clinical nursing staff and Nurse Educators
- Meets monthly to review content and application design

◆ **Clinical Content Committee**

- Multidisciplinary workgroup
- Review content and functionality; make recommendations

◆ **Nursing Informatics**

- Reviews decisions made in above meetings
- Provides feedback and recommendations as appropriate

What did we plan to standardize?

◇ **Multidisciplinary patient flow sheet**

- More than 15 different flow sheets (12 ICU, General care units, others)
- A shift from the “nurse’s flow sheet” to the “patient’s flow sheet”

◇ **Nursing note structure**

- Synthesis notes, problem oriented notes
- Education notes, transfer notes, discharge notes
- Handwritten, Microsoft word

◇ **Initial/Admission Nursing Assessment**

- Two forms with tightly held traditions

◇ **eMAR integration**

- Different e-mar and pharmacy systems at each site

◇ **Multidisciplinary patient problem list**

- Transition to “The Patient’s Problem List”

Standardization Step 1: Accelerated Design Sessions

◆ **The Purpose:**

- To make key design decisions around critical elements of workflow and content to support clinical documentation

◆ **The Approach:**

- Place a large number of clinicians (RN, MD, HP) **from both AMCs** into one room in order to reach consensus

◆ **The Sessions:**

- Structured to drive consensus around defined topics
- Nine all day session and one all day Report Out session
- Designed to “build” upon decisions made in previous sessions
- Decisions made were considered final!

Standardization Step 1: Accelerated Design Sessions

◆ The Follow-up

- Establish clear processes to use the AD content:
 - Identify priority areas for content development
 - Define the content review & approval process
 - Standardize the process for conflict resolution
 - Define the selection of domain experts
 - Ensure broad review and collaboration during content development
- Sustain the momentum of established workgroups
- Articulate nursing practice so that the practice informs the electronic form

Standardization Step 2: Content Crosswalk Sessions

◇ **The Purpose:**

- To review key decisions around the content in order to standardize terminology that came from AD sessions across disciplines.

◇ **The Approach:**

- Representative multidisciplinary content teams at each site
- Areas of terminology overlap where data elements could potentially be consolidated were identified
- Overlap content from each discipline was reviewed with specific options for consolidation

◇ **The Sessions:**

- Structured to drive consensus around defined topics.
- Decisions made were considered final!

Standardization Step 2: Content Crosswalk Sessions

◇ The Process

- Content areas were prioritized
- Item-by-item review of all data elements by KM team
- Look for duplicates & attempt to consolidate
- Mapped to standard nomenclatures such as LOINC and SNOMED
- Naming conventions applied as appropriate
- Potential overlap data elements presented to Crosswalk teams
- Whenever possible, and depending on the context of the term, team reached consensus on ONE term
- Results of crosswalk reviewed at the other site, if disagreement resulted, the data element would return for further review until consensus was achieved
- Significant content changes or disagreement would get escalated to a joint content governance committee

Crosswalk Example

Vital signs content Current

Vital Signs Content Recommended Terms/New Parameters

<u>Nursing</u>	<u>Physician</u>	<u>Long Name</u>	<u>Short Name</u>	<u>Comments</u>
Temperature:				
Temperature (interfaced or manual entry)	Temperature (number)	Temperature	Temp	Perfer default to be F
Temperature Unit (C or F)		Temperature Unit (C or F)		
Temperature route (pick list)		Temperature route (pick list)		
Temperature management device used (pick list)		Temperature management device used (pick list)		
Temperature assist device used (pick list)		Temperature assist device used (pick list)		
		Temperature Min	Tmax	In the last 24 hours
		Temperature Max	Tmin	In the last 24 hours
HR/Pulse:				
Heart rate/Pulse Rate (number)	Heart rate/Pulse Rate	Heart Rate	HR	Can we ask x if they combine manual and interfaced?
Heart rate (number)				
Measurement method (pick list)		Heart Rate Measure Method (pick list)		
Measurement sites (pick list)		Heart Rate Meaurement Site		
Heart Rate Regularity (reg/irreg)		Heart Rate Regularity (reg/irreg)		
		Heart Rate Min	HR min	In the last 24 hours
		Heart Rate Max	HR max	In the last 24 hours

Joint Nursing Documentation Committee

- ◇ Articulate our vision for electronic acute care nursing documentation
- ◇ Take a leadership role in establishing requirements for a system that captures the essence of nursing care.
- ◇ Decision making body for issues specific to nursing
- ◇ Identify sources of content and provide leadership around content vetting
- ◇ Define the level of specificity of data collected at the point of care.

Case Study: Standardization of Nursing Assessment

◇ The Purpose

- Reach standardization of initial nursing assessment content and terminology based on evidence and best practice

◇ Current state

- Accelerated Design sessions established a large inventory of potential assessment data elements
- Nursing practice (content and workflow) was very different at both sites

◇ The Approach

- Joint Nursing Assessment Task Force to determine
 - Which data elements to include
 - Which term to use to capture the concept

From the conceptual to the practical

1. We had extensive “final” content from ADS and from crosswalk.
2. We had ACD “authoring teams” ready to use the content to build the tool.
3. We had concerns about the impact on practice that the ADS content would cause
4. We expected and wanted a tool that would support good nursing practice
5. **We needed a method to help these teams make the best decisions about what content will be included or excluded in the assessment.**

There's more to it

- ◇ Beyond helping the authoring teams “build” the tool there was much work to be done to achieve “best” nursing assessment practice
- ◇ Our mutual goal was to build an assessment tool that would:
 - Support good nursing practice (nurse sensitive problems & outcomes of nursing care)
 - Support the work of the bedside nurse (evidenced based nursing interventions)
 - Support a dynamic plan of care (future work)
 - Identify new knowledge
 - Apply knowledge to practice

Nursing Assessment Task Force

- **The Process**
 - **Review the characteristics of expert nursing practice**
 - **Identify themes of assessment best practice in the literature and current practice**
 - Establish guiding principles to inform nursing assessment content (help decide what to include/exclude)
 - Validation sessions to test against assessment data elements
 - Accept the guidelines and then use to inform our nursing assessment documentation development
 - Establish “use” guidelines which will inform our policy development for future nursing assessment practice.
 - Name this documentation tool!

Nursing Assessment Task Force

Our first session we asked and discussed these questions.

- ◆ Describe your practice as it relates to the nursing admission assessment.
- ◆ What, if any, information collected during your admission assessment do you deem critical to caring for your patient/family?
- ◆ Describe “ideal” nursing practice as it relates to the nursing admission assessment.

Nursing Assessment Practice: Themes for Inclusion

◆ Intentionally establishing a relationship

- Welcoming, Trust
- Intentional about understanding and responding to patient experiences
- Partnership: patients perceptions influences & RN judgment shapes interventions

◆ Getting patients 'settled'

- Acclimating patient to the environment and to the RN
- Caring , comfort, and safety
- Physiologic stability

◆ Process: Not linear/Collaborative

- Patient readiness
- Assessment and judgment
- Starts before RN meets patient

◆ Nurses: Continuum of development in practice

- Language / open ended questions

Nursing Assessment Practice: Themes for Exclusion

- ◇ **Ongoing vs immediate need for data**
 - Info that would be needed after the first 24 hours
 - “important but not needed now”
- ◇ **Data captured in other places**
 - Data collected by other disciplines
 - Meds captured in PAML
- ◇ **Duplicates**
 - Eliminate the narrow in place of a more broad question
- ◇ **Information seen as having limited value**
 - Patient appropriate circumstances
 - “not the right question”

Nursing Assessment Task Force

- **The Process**

- Review the characteristics of expert nursing practice
- Identify themes of assessment best practice in the literature and current practice
- **Establish guiding principles to inform nursing assessment content (help decide what to include/exclude)**
- **Validation sessions to test against assessment data elements**
- Accept the guidelines and then use to inform our nursing assessment documentation development
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- Name this documentation tool!

Nursing Assessment Task Force

Our next session we reviewed the themes and created “guiding principles”.

- ◆ Content guidelines will help the authoring team make more informed decisions regarding inclusion/exclusion of assessment content.
- ◆ Decisions based on guidelines are less likely to be based on tradition/habits/old ways

Guidelines for Nursing Assessment Content Build

- ◇ Is this question mandatory?
 - The Joint Commission, CMS, DPH, other

- ◇ Is this question pertinent to patient safety?
 - Fall risk, Skin integrity risk, other

- ◇ Is this question critical for the short term?
 - Info required to provide immediate care

- ◇ Is this question required to formulate a nursing Plan of Care?
 - Wound care, other

- ◇ Does this question support initiation of a consult?
 - Nutrition, PT, Chaplaincy, other?

Guidelines for Nursing Assessment Content Build

- ◇ Does this question contribute to “getting the patient settled”?
 - Acclimated
 - Comfortable
 - Safe
 - Prepared

- ◇ Does this question contribute to a mutual understanding of reason for hospitalization?
 - Reconcile any difference between nurses’ understanding of the reason for hospitalization with that of the patient’s.

- ◇ Will this question help to describe the patient’s condition on admission?
 - Set a baseline health status.

Guidelines for Nursing Assessment Content Build

Exclude

- ◆ Is this question required to formulate a discharge plan?
 - Info not critical to the immediate admission time frame

- ◆ Is this question critical for the long term?
 - Valuable information required as part of hospitalization, not required in the immediate admission time frame

- ◆ Is this question asked and documented by another discipline?
 - Eliminate duplicate documentation
 - Support validation of another discipline's documentation

- ◆ Is the question covered elsewhere?
 - Eliminate duplicate/like questions

- ◆ Is this the right question or wording?
 - Did we get it right in Accelerated Design Sessions (ADS)?

Nursing Assessment Task Force

Our next session we validated the “guiding principles” against the AD assessment content..

- ◆ Groups were provided assessment data elements and “guiding principles”
- ◆ Asked to make inclusion/exclusion decisions using the guidelines.
- ◆ Large group review of results
- ◆ Process repeated using Nursing Documentation Committee

Validation Results

- ◆ Overwhelming consensus that content guidelines helped to make more informed decisions regarding inclusion/exclusion of assessment content.
- ◆ Less likely to make decisions based on tradition/habits/old ways
- ◆ Accepted guidelines with a few recommendations
- ◆ Final version of guidelines was the 4th version

Final List of Guiding Principles

- ◇ Is this question mandatory from a regulatory perspective?
- ◇ Is this question critical for the short term and does it contribute to “getting the patient settled”?
- ◇ Is this question required to formulate a nursing Plan of Care?
- ◇ Will this question contribute to a mutual understanding of the reason for hospitalization?
- ◇ Will this question help to describe the patient’s condition on admission?
- ◇ Is this question pertinent to patient safety?
- ◇ Will this question support initiation of a consult?
- ◇ Will this question help set a baseline health status?
- ◇ Is this question required to formulate a discharge plan?
- ◇ Is this question critical for the long term?

Nursing Assessment Task Force Results

- ◆ Guiding principles allowed the build team to identify a standard minimum assessment data set that was acceptable for use by both AMCs
- ◆ Overwhelming consensus that applying guiding principles to the “build” process helped the team make informed inclusion/exclusion decisions versus decisions based on tradition/habits/old ways
- ◆ Multi-site, standardized, electronic initial assessment was built and approved

Standardization: Lessons Learned

◇ Right process

- Project charter with clearly defined scope
- Specific goals for each meeting with structured discussions
- Each meeting built upon consensus achieved from previous meeting
- Structured process valued participation and input from bedside nurses

◇ Right people

- Nursing leadership
- Novice and expert clinical nurses
- Skilled nursing leadership facilitators

◇ Right goals

- Task force members able to focus on goals and objectives of the work and able to leave behind “the way we have always done it” for the sake of a successful improvement initiative

◇ Right Outcome

- Task force believed that the end product was even better than they had expected

What else did we accomplish?

◆ **Standardization of the patients flow sheet!**

- Clinical staff experts and informatics nurses together reached consensus on thousands of data element terms to be “built” into ONE patient flow sheet.

◆ **Standardization of the nursing notes!**

- Clinical staff experts and informatics nurses together reached consensus on a single format for progress note and transfer note

◆ Weekly meetings and e-room discussions/voting facilitated this tedious process

What did we learn?

- ◆ You can't please all the people all the time...not everyone was happy
- ◆ Keeping the patient at the forefront of decision making helped to keep things on track
- ◆ That consensus and documentation standardization can be achieved with smart, dedicated, motivated people working towards the same goal....
- ◆ And.....



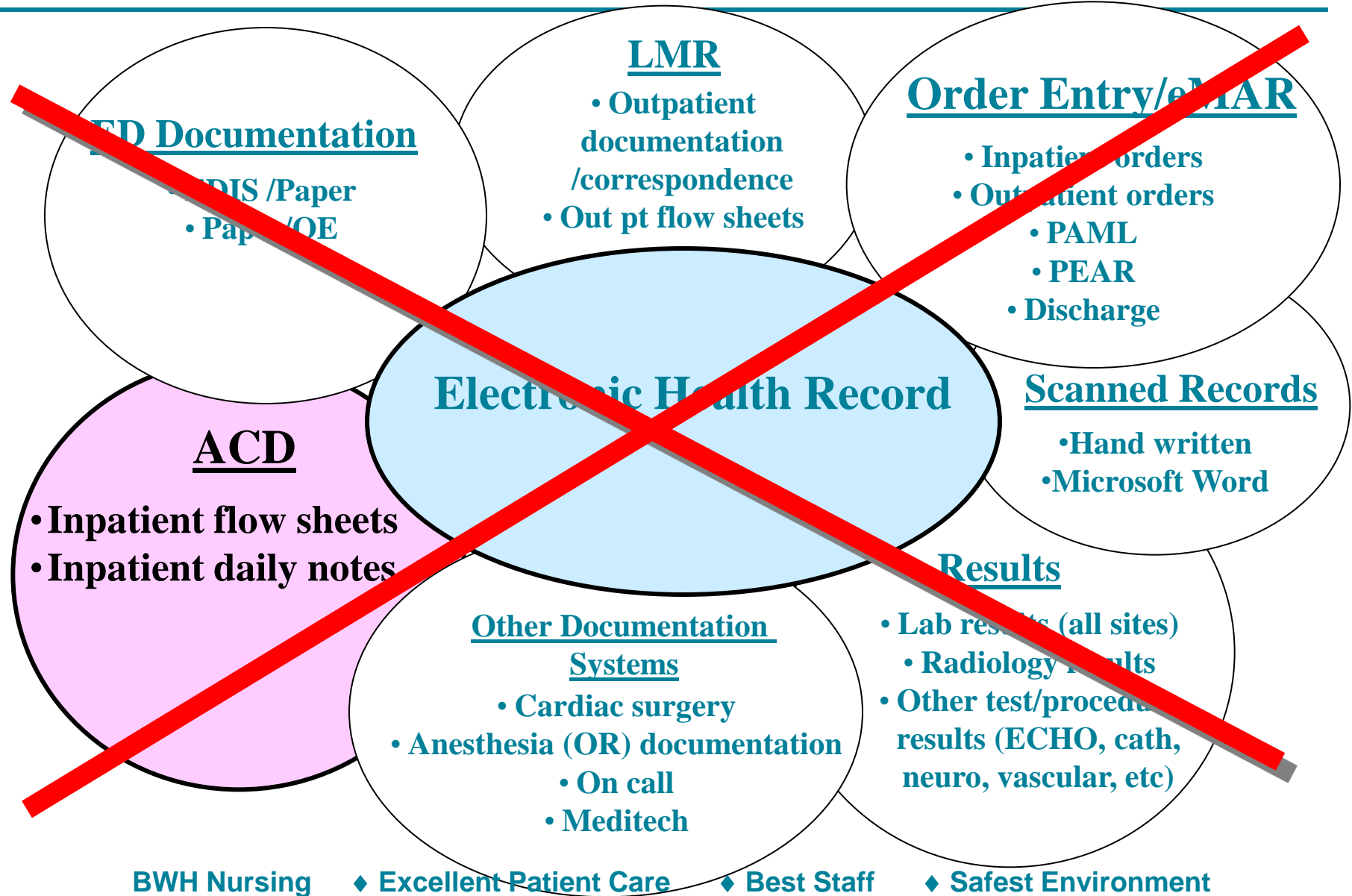
**You better start
swimming or sink
like a stone, cause
the times they are a-
changing.**

Bob Dylan

DON'T BE
AFRAID OF CHANGE.

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Our (Complicated) Electronic Health Record



On to our Epic Journey!



After 3 years of consensus building and documentation standardization, a decision was made to replace the entire legacy system with a vendor system

All the intellectual capital will be saved and reused!

The only way to make sense out of change is to plunge into it, move with it, and join the dance.

Alan Watts

Discussion



"A positive attitude may not solve all your problems, but it will annoy enough people to make it worth the effort." - Herm Albright

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Thank You!

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