

The clock is ticking – are you ready?

Write, Type or Talk

Structured Data is a requirement.

There is no question – Structured Data is a requirement in health care, and not just for Meaningful Use. Stage 1 MU requires structured data for a variety of objectives (see Figure 1). A new question is being discussed: *how are* the requirements are going to increase and *when* will they increase – in MU 2 and/or MU3.

What is Structured Data?

Structured Data is well-formed, coded, clinical information like Problems, Medications, Allergies and Immunizations that is interoperable – actionable and shareable. Structured Data is *not* free text sent from your transcription system into your EHR via HL7. Typically, structured data is presented in XML as a CDA document containing ICD-9/10, CPT, LOINC, CVX and other codes. EHR-entry provides structured data; however, many providers are still resisting using the EHR for creating patient documentation.

Why you need Structured Data.

Structured Data is essential to health care for sharing clinical information amongst providers – Health Information Exchange (HIE). Structured Data enables researchers the opportunity to compare effectiveness of new treatments and drugs, identify areas of possibility and of concern, as well as inform the government about the success (or failure) of quality initiatives. It is not possible to run analytics on unstructured text, so the need for structured data is real, and it's here to stay.

How we can help

BayScribe converts all types of unstructured patient reports – dictated & handwritten notes in many formats (.doc, .rtf, .pdf, .txt, HL7) – to Structured, Coded Data for use by providers within your EHR as well as by the health care community via HIE/NHIN and other uses as appropriate.

PROBLEMS:

1. COPD
2. GERD
3. Asthma
4. Type II Diabetes

MEDICATIONS:

1. Ipratropium
2. Albuterol
3. Mucinex
4. Prilosec
5. Insulin

ALLERGIES:

1. Penicillin
2. Codeine
3. Latex

Core set of objectives to be achieved by all eligible professionals, hospitals, and critical access hospitals to qualify for incentive payments		
BayScribe	Objective	Measure
✓	Record patient demographics (sex, race, ethnicity, date of birth, preferred language, and in the case of hospitals, date and preliminary cause in the event of death)	Over 50% of patients' demographic data recorded as structured data
✓	Record vital signs and chart changes (height, weight, blood pressure, body-mass index, growth charts for children)	Over 50% of patients 2 years of age or older have height, weight, and blood pressure recorded as structured data
✓	Maintain up-to-date problem list of current and active diagnoses	Over 80% of patients have at least one entry recorded as structured data
✓	Maintain active medication list	Over 80% of patients have at least one entry recorded as structured data
✓	Maintain active medication allergy list	Over 80% of patients have at least one entry recorded as structured data
✓	Record smoking status for patients 13 years of age or older	Over 50% of patients 13 years of age or older have smoking status recorded as structured data
✓	Implement capability to electronically exchange key clinical information among providers and patient-authorized entities	Perform at least one test of EHR's capacity to electronically exchange information
✓	Incorporate clinical laboratory test results into EHRs as structured Data	Over 40% of clinical laboratory test results whose results are in positive/negative or numerical format are incorporated into EHRs as structured data

Figure 1

It's a journey.

The race is on to get to Meaningful Use and every CXO is scrambling to evaluate, acquire and integrate technology to ensure that their facility will maximize reimbursement, with as little disruption to clinical workflow as possible. There are lots of challenges ahead and MU 2 and MU3 will likely bring more, not less.

When you consider the additional challenges of ICD-10 transition and the new Medicaid RAC pressures, documentation will likely take a back seat for a while, especially when the physician adoption of EHR is still so low. Physician adoption of EHRs will likely continue to limp along because of one key factor – usability.

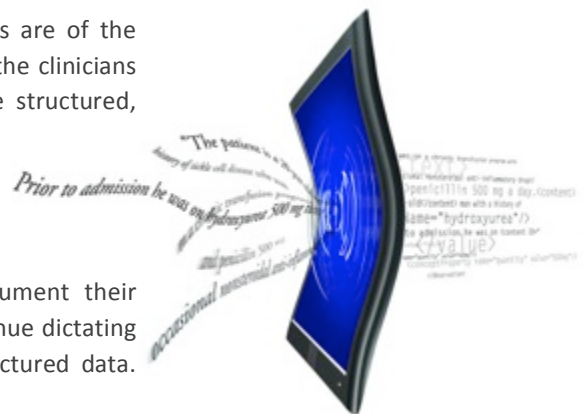
Usability of EHR is continuing to inhibit adoption, because most Clinicians are of the mindset: *Point-and-click? Sorry, not interested.* But the clock is ticking. If the clinicians won't perform data entry in the EHR, how else will your facility get the structured, codified data that is needed for Meaningful Use?

BayScribe, that's how!

Structured Data without a mouse

Your providers who are reluctant – if not outright refusing – to document their encounters in the EHR using the mouse-and-keyboard may be able to continue dictating or handwriting their notes with BayScribe populating your EHR with structured data. That's good for physician satisfaction and patient care.

Imagine how much more information your EHR would have if it contained all of the data that is trapped in those paper archives. What would that mean to the quality of your patient care? To your research and clinical trial processes? That possibility now exists.



Problems Meds Allergies Immunizations Procedures Lab Tests Phys Exam Sample H&P structured & coded Adjust Height: [-] [+]

Problems - Chief Complaint							
Name	Location	Type	Change	Certainty	ICD-9	ICD-10	Source
failure to thrive					783.41	R62.51	chief complaint

Problems - History of Present Illness							
Name	Location	Type	Change	Certainty	ICD-9	ICD-10	Source
pneumonia				high	486	J18.9	history of present illness
failure to thrive				high	783.41	R62.51	history of present illness

Problems - Assessment							
Name	Location	Type	Change	Certainty	ICD-9	ICD-10	Source
dehydration					276.51	E86.0	impression
failure to thrive				high	783.41	R62.51	impression
chronic obstructive pulmonary disease					496	J44.9	impression
coronary artery disease					414.00	I25.10	impression
healthcare associated pneumonia					486	J18.9	impression
hypertension					401.9	I10	impression
diabetes mellitus					250.00	E11.9	impression
neuropathy					356.9	G62.9	impression
dementia					294.20	F03	impression
hyperlipidemia					272.4	E78.5	impression
transient ischemic attack					435.9	G45.9	impression

CHIEF COMPLAINT: Failure to thrive.

HISTORY OF PRESENT ILLNESS: The patient is a 76-year-old gentleman who was recently in Memorial Healthcare with pneumonia. He was discharged back to Mercy. At Mercy over the last several days he has been not eating or drinking. He presents with failure to thrive. Family has decided and agreed to PEG tube placement at this time.

ALLERGIES: Penicillin.

IMMUNIZATIONS: Pneumovax.

MEDICATIONS:
 Nebulizer with albuterol t.i.d.
 Namenda 10 b.i.d.
 Pyridium 100 mg t.i.d.
 NovoLog 6 units before meals.
 Advair discus 500/50 twice a day.
 Donnatal oral twice a day.
 Allegra-D.
 Lexapro.
 In the past patient had been also been on Coumadin for paroxysmal atrial fibrillation.

PAST MEDICAL HISTORY: Healthcare-associated pneumonia with pleural effusion, chronic obstructive pulmonary disease, hypertension, diabetes mellitus, peripheral neuropathy, dementia, hyperlipidemia, transient ischemic attack, depression, basal cell carcinoma of the skin, status post MOHS chemosurgery, proteus urosepsis, peripheral arterial disease, benign prostatic hypertrophy, abdominal aortic aneurysm.

PAST SURGICAL HISTORY: Cholecystectomy, cardiac catheterization with stents and a vascular graft of the abdominal aortic aneurysm, basal cell surgery of the nose.

SOCIAL HISTORY: Patient smoked 1 pack a day for 60 years. Denies alcohol or drug abuse. Works as a contractor with asbestos dust, fiberglass dust, metal and silica dust.

Problems. Medications. Allergies.

Immunizations. Labs. And more. You can officially expect more from your clinical documentation. With ease, you can locate patients with potential documentation issues (CDI) and review and compare all of the encounter notes. With a couple of clicks, Case Managers can review patients in key Quality areas, like Heart Failure and Stroke. Researchers can identify all 40-45 YO Female Smokers with Positive Mamo's taking "X Med" but not "Y Med" with a Family Hx of Lung Cancer... without calling IT.

Imagine the possibilities.

Your physicians can continue to dictate or write their patient notes, just as they do currently – no change to their existing workflow whatsoever. The report is processed through a Natural Language Processor (NLP) and appropriately codified using Intelligent Medical Objects (IMO). The report, now structured data, can be exported as a Level 3 CDA (Clinical Document Architecture – interoperable XML) to wherever it is needed – your EHR, your state HIE, or to another provider across the country.

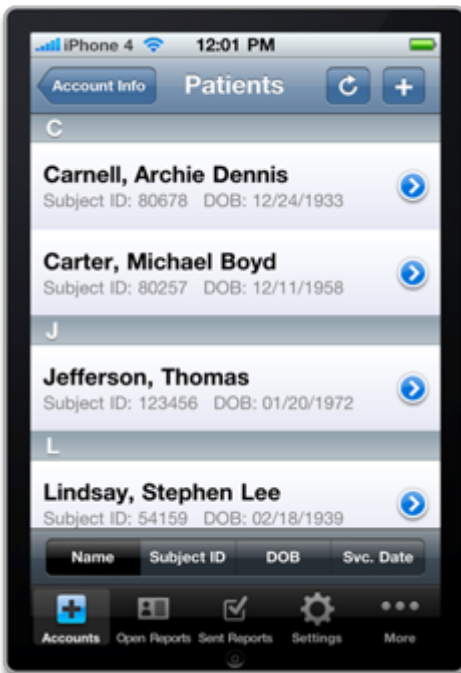
If you have historical patient records, we can help you convert those records from warehouses full of paper to image files and OCR files to extract the clinical information trapped within those documents. Not only will this reduce your operating costs, it will provide access to patient data that can be used in a variety of ways via Image & Data Repositories that greatly reduce your reliance on those files, as well as create data re-use opportunities for you.

It's amazing – and it's a reality.

The technology exists today, with BayScribe, to convert your unstructured patient documents into meaningful structured reports – reports that can be used throughout the facility by numerous departments to improve quality of care and efficiency, saving time, money and potentially, lives. What is better than that?

You don't have to change your current systems to benefit from BayScribe, just your way of thinking about what's possible.

evolve



The patient is an 84-year-old female...

...with a history of poorly controlled Diabetes who presents with contusions sustained from a fall, possibly from fainting.

Providers prefer to dictate their patient reports because the narrative allows for the uniqueness of documentation. The EHR template-method of documentation is unable to provide the level of detail that can be captured with dictation. Could you imagine an EHR-template drop-down box like this:

The patient tripped on the (curb, Newspaper stand, extension cord, slippery floor) while walking into the restroom at the local (7-eleven, WaWa, Royal Farm Store, Circle K, Gas Station) and bumped their head on the (right, left) side causing multiple (contusions, lacerations, bruises).

It's about detail.

Dictation does what templates simply cannot – provide efficient and detailed descriptions of numerous elements relative to an encounter, with great detail. Traditionally, dictation does not provide the ability to acquire structured data, which is what initiated the move to EHR – not to mention the line item expense was an easy target for EHR vendors.

It's about data.

Dictation still does not inherently provide structured data, but with BayScribe, you can convert your unstructured transcribed reports into structured data and let the physicians continue to use the most established means of documentation in health care today – voice.

talk

LEVEL OF CARE AND CATEGORY ORDER

Barcode: [Barcode]

LEVEL OF CARE AND CATEGORY ORDER

Physician's Name: *BLADE, JOHN*

2011 PENICILLIN

72 171 CHESTNUT HIP PAIN

Clearly indicate only one choice of Level of Care on arrival or when necessary to upgrade to patient's condition. (Check one only)

Level of Care: LEVEL OF CARE MUST BE INDICATED PRIOR TO BED ASSIGNMENT

For GBN fee order to Bed Management at 601-5505

For Material fee order to 601-6200 For Over Material fee order to 767-8504

PC Admit Inpatient

- Severity of illness/severity of service supports inpatient admission.
- Medicare's "Inpatient Only" procedures.
- Admission to critical care.

Outpatient Observation

- Does not meet severity of illness/severity of service for inpatient admission.
- Alternative to inpatient admission when more time is needed to evaluate a patient's condition, response to treatment, and/or to determine the need for inpatient admission.
- Patient has complications following an ambulatory/outpatient procedure.
- Hospital stay pre-certified/pre-authorized for outpatient observation.

Category Status: Clearly indicate appropriate Category Status. (Check one only)

Category 1 unless otherwise indicated below

Category 1 - Full Code. In case of cardiac or respiratory arrest, resuscitate, stabilize, and place on a ventilator. Emergency. The patient will receive CPR per ACLS protocols.

Category 2 - Code without Mechanical Ventilation (CMV). In case of cardiac or respiratory arrest, resuscitate with CPR per ACLS protocols and/or with other measures, but do not intubate or put on mechanical ventilation. In the event spontaneous respirations do not return, resuscitation efforts may cease.

Category 3 - Do Not Resuscitate (DNR). Continue with therapies as ordered, but do not resuscitate or intubate in the event of cardiac or respiratory arrest.

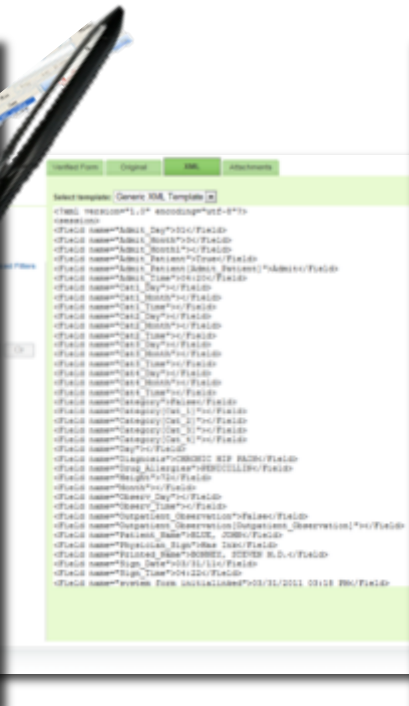
Category 4 - Allow Natural Death (AND). Provide comfort and palliative care only. Do not attempt resuscitation.

NURSING: INDICATE "RECEIVED DATE, TIME AND SIGNATURE" AFTER EACH ORDER

Physician's Signature: [Signature] Date: 3/21 Time: 0:32

Print Name: BONNEY, STEVEN M.D.

LEVEL OF CARE AND CATEGORY ORDER PAGE 1 OF 1



LEVEL OF CARE AND CATEGORY ORDER

Barcode: [Barcode]

LEVEL OF CARE AND CATEGORY ORDER

Physician's Name: *BLADE, JOHN*

2011 PENICILLIN

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NURSING: INDICATE "RECEIVED DATE, TIME AND SIGNATURE" AFTER EACH ORDER

Physician's Signature: [Signature] Date: 03/21/11 Time: 04:22

Print Name: BONNEY, STEVEN M.D.

LEVEL OF CARE AND CATEGORY ORDER PAGE 1 OF 1

The pen is mightier!

If you have ever tried to draw on a monitor with an ink pen, you know that the PC wasn't developed to accommodate scribble or circles and 'X's' identifying pain areas on a flow sheet. No, that is better suited for pen and paper – and it is highly preferred by physicians in those situations.

Couple this with the fact that the Digital Ink pen is also a scanner and workflow tool, and now you really have something to get excited about. Automatically retain the PDF scan of the original document (above left) and pass it along to various stakeholders eliminating costly and time-consuming photocopying, faxing and scanning.

Emergency!

Another excellent and often overlooked aspect of the digital pen is that there is zero instruction necessary, which means that in a disaster situation everyone can perform documentation tasks, gather information, and triage cases – without an extension cord, for days on end.

The PC has its place.

The PC has its place, and so does the pen. The PC can analyze data at speeds beyond reproach. And now that data can be extracted from the paper documents (as shown above), new possibilities exist that were once, ironically, just dreams written on the back of a napkin.

Everyone still uses paper to some degree. Let us help you make the most of it!

Write



Historical Document Conversion

'Write, Type or Talk? What about the warehouse full of paper files', you say. Excellent. We can help there as well by creating an Image & Data Repository.

Image is everything.

BayScribe delivers solutions for converting historical paper documents, both typed and written, into image files to incorporate into your EHR, as well as an image repository to locate the 'original document'. Facilities can save hundreds of thousands of dollars annually by eliminating the storage costs for paper records once they are scanned, as well as reduce the risk associated with losing those records.

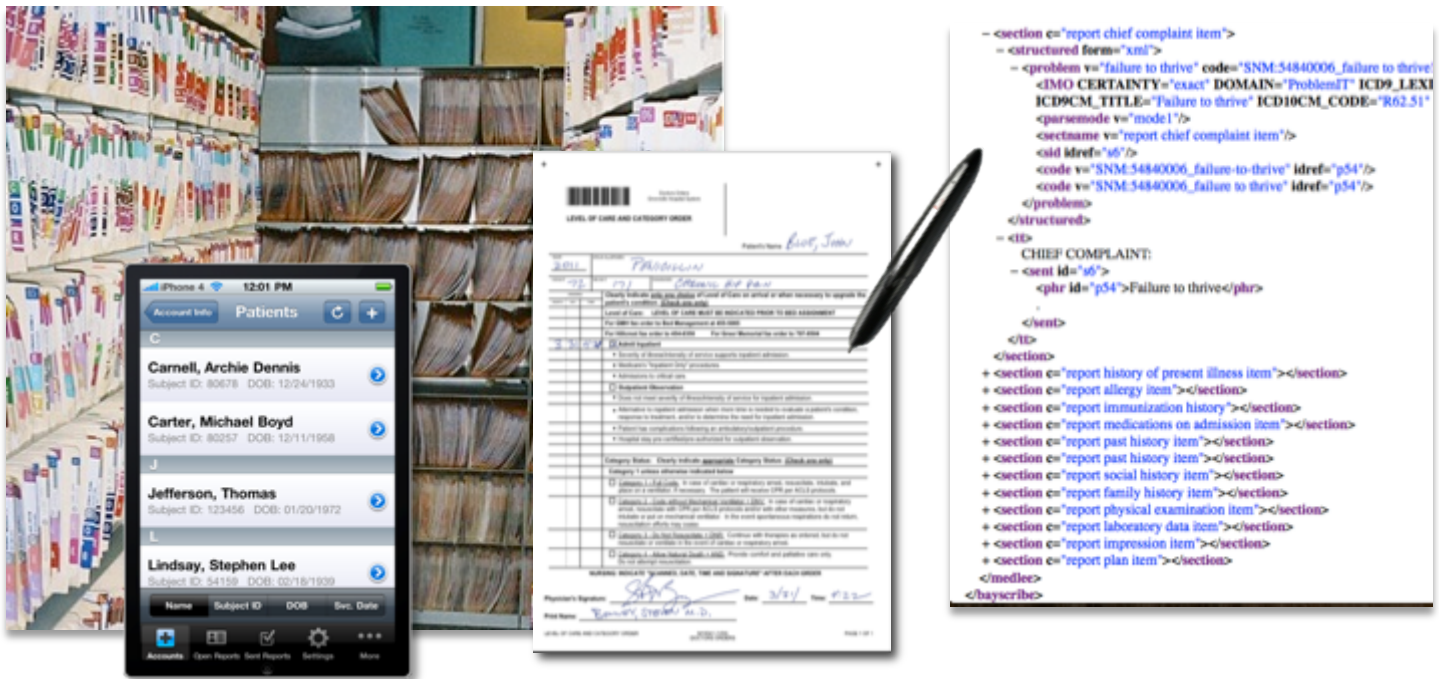
Unlock the data.

Additionally, the documents can be OCR-scanned to create a Data Archive, unlocking valuable information trapped in the static paper documents. Imagine how much more valuable your EHR would be if it contained all of the data from the historical paper documents, not just the image files.

Patient Care requires Data.

Data from historical documents can aid in the proper and expeditious care of your patients as well as provide valuable information for clinical research. Maybe it's time to do something with 'all that paper'.

paper



Data capture, not Physician capture

Write, Type or Talk – as long as your facility gets the data needed for Meaningful Use, why does it matter *how*? Here is an outrageous statement:

Let physicians document their encounters the way they want to!

Physicians understand that focusing on the EHR workstation inhibits cognitive thinking. If a physician can remain focused on doing her job – assessing and treating the patient – isn't that a good means of improving care? Conversely, if the physicians attention is on the PC... well, isn't that a job for IT?

BayScribe provides the tools to convert the unstructured text into structured data to enable efficiency and improve patient care. So why not give the physicians tools they want to use? Don't chain them to a PC.

Getting Ready

Meaningful Use 2 & 3 are likely going to raise the requirements on facilities to increase the percentage of data retained as structured data. We can help. And now is probably a good time before you get busy with ICD-10 and Medicaid RAC.

data

For more information:

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