Electronic Signature in Patient Access: Myth or Reality

- Association of Illinois Patient Access
- PATIENT ACCESS IS HOT, HOT, HOT
- The Chicago Firehouse, Chicago, IL
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Electronic Signature Overview - Google It

- An **electronic signature**, or e-signature, is any electronic means that indicates either that a person adopts the contents of an electronic message, or more broadly that the person who claims to have written a message is the one who wrote it (and that the message received is the one that was sent). By comparison, a **signature** is a stylized script associated with a person. In commerce and the law, a signature on a document is an indication that the person adopts the intentions recorded in the document. Both are comparable to a seal.

- Increasingly, encrypted digital signatures are used in e-commerce and in regulatory filings as digital signatures are more secure than a simple generic electronic signature. The concept itself is not new, with common law jurisdictions having recognized telegraph signatures as far back as the mid-19th century and faxed signatures since the 1980s.

- In many countries, including the United States, the European Union and Australia, electronic signatures (when recognized under the law of each jurisdiction) have the same legal consequences as the more traditional forms of executing of documents.

- The Electronic Signatures in Global and National Commerce Act (ESIGN, Pub.L. 106-229, 14 Stat. 464, enacted June 30, 2000, 15 U.S.C. ch.96) is a United States federal law passed by the U.S. Congress to facilitate the use of electronic records and electronic signatures in interstate and foreign commerce by ensuring the validity and legal effect of contracts entered into electronically. In 2010, both Houses of Congress passed a resolution at the request of industry leaders, recognizing June 30 as "National ESIGN Day."

- Although every state has at least one law pertaining to electronic signatures, it is the federal law that lays out the guidelines for interstate commerce. The general intent of the ESIGN Act is spelled out in the very first section(101.a), that a contract or signature “may not be denied legal effect, validity, or enforceability solely because it is in electronic form”. This simple statement provides that electronic signatures and records are just as good as their paper equivalents, and therefore subject to the same legal scrutiny of authenticity that applies to paper documents.
What makes it legal?

- The law is intentionally technology neutral and does not dictate any one technology over another in the implementation of E-sign solutions.

- However, it does include several requirements regarding what constituted a legally binding ESIGN transaction. For an e-signature to stand up in a court of law, the solution needs to support the following (which also apply to standard paper-based contracts):

  **Signer Authentication** – verification of the identity of the person signing

  **Document Authentication** – verification that the document signed cannot be altered

  **Proof of Intent** – verification that the signer intended to accept terms of contract

- What makes an electronic signature even more valuable and secure than the paper-based copy is the ability to encrypt the information using key data elements that are unique to this transaction. For this reason, maintaining all forensic data is important when proving the validity of the signature. The timestamp and transaction-specific data elements need to be embedded with the signature to ensure that the signature is a single instance and cannot be copied to additional documents (non-repudiation).
OK, its legal now what? Workflow Considerations

• Bedside vs. Desk Top (patient sitting/standing) vs. Kiosks
• What if the patient refuses to sign electronically?
• What if the patient decides they only want to agree to certain paragraphs?
• What if the patient is not able to sign
• Where are computers located relative to the registration?
• Where are printers located relative to registration?
• What type of desk space is available to add real-time signature devices?
• What happens to the final documents?
What do your forms look like?

- Does the form require a witness signature?
- Are there multiple patient or witness signatures required?
- Is the patient required to interact with the entire page (checking boxes, initializing paragraphs) or do they simply sign and date the form?
Is a hybrid solution (different signing capabilities throughout your facility) the best, what about standardization and training?

1. Factors that limit implementation?
2. What are we trying to solve for? The time and hassle it takes us to find the document we need, sticker them and then have them signed and scanned to proper account?
3. Well the first thing you need to do is have the business rules that determine which forms are needed for which patient. So you need a forms package.
4. If the forms package can print the forms automatically fully barcoded is E-Sig saving you any time?
Sample Selection Criteria

Example of the level of detail a registrar must remember for a single form:

Language <> Spanish
If Financial Class = 04,13,23,26,40,45,48,49,58,85
If Patient Type = 1 -or-
If Patient Type = 2 and Hospital Service Code = 58,59 -or-
If Patient Type = 0 and Hospital Service Code = 35 -or-
If Patient Type = 0 and Hospital Service Code = 36 and Clinical Code = OS,DH,BT,CH,AB,BR, BX,CL,CV, EI, GI, IV, WC

Imagine having to remember this level of detail for every document type, every government regulation, and every payor-specific documentation requirement...

Ideally your forms package would be smart enough to know what forms need to be completed by the patient and what needs to be witnessed by the registrar.
So what’s required?

1. Electronic Signature Capture Device (extra pens)
2. Computing device (to complete the registration)
3. Forms software
4. Completed form storage and viewing
5. Photo ID and Insurance Card Scanner
6. Carrying case or mobile work platform (for bedside)
Electronic Signature- now we are getting somewhere- It’s All about the workflow and devices

Electronic Signatures in Global and National Commerce Act (commonly known as ESIGN) became effective 2000

Minimum Requirements
✓ Signer Authentication
✓ Document Authentication
✓ Proof of Intent

Additional Requirements to Consider
✓ Patient’s consent to use e-signature (Privacy Notice?)
✓ Give patient option to receive completed copies
✓ Give patient opportunity to revoke consent
✓ Can registrar witness electronically or need E-Sig Device
Option 1: Signature Pads

This device is similar to the signature pads used at retail outlets for capturing a customer’s signature for a credit card transaction. Typically a hard copy of the form being completed will be available for viewing and/or the title of the form will be across the top of the device. Alternately, larger devices can simulate the form for signing.

Pros
- In-expensive
- No intrinsic value...may not be of interest for potential theft

Cons
- Signature only….patient cannot interact with the rest of the form (i.e. check boxes, initialize sections).
- Less “self-recovery” options for patient…if they make a mistake, it isn’t as easy to simply “go back” and redo the signature
- Patient may not fully understand exactly what they are signing
- Costs: $100-400.00/ea.
Option 2: Signature Pad with Display

- This device is similar to the signature pads used at retail outlets for capturing a customer’s signature for a credit card transaction. A second monitor would be placed on the registrar desktop facing the patient. They would view the document and then sign it using the signature pad provided.

**Pros**
- Less expensive
- No intrinsic value…may not be of interest for potential theft
- Can have step through of questions and answers

**Cons**
- Signature only….patient cannot interact with the rest of the form (i.e. check boxes, initialize sections).
- Less “self-recovery” options for patient…if they make a mistake, it isn’t as easy to simply “go back” and redo the signature

- Estimated Hardware Cost (per unit) $850.00 - $1,000
- *Includes radial arm mount, 20” monitor, and LCD signature pad*
Option 3: ClipGem Device

This device is connected to mobile cart workstation or desktop unit via USB cable. Requires hard copies to be placed on the ClipGem one at a time. The patient signs each of them individually and gives the device back to the registrar. The registrar removes the page and replaces it with the next document to sign. This process continues depending on how many documents are required.

**Pros**
- Low cost device
- No intrinsic value…may not be of interest for potential theft
- Patient can keep the hardcopy document for their records
- No need to leave the patient and return with signed copies
- Corner to corner interaction with forms

**Cons**
- If more than one document is to be signed, the constant back and forth process can add time to the registration process.
- Connection to workstation is via USB cable. If the cable becomes disconnected, this would require intervention by the end user
- Forms must be printed prior to being signed

- Estimated Hardware Cost (per unit)$300-450.00
Option 4: Signature capable touch screen display

This device is a large size touch screen monitor. The patient sign directly on the screen using a stylus pen. These type of touch screen monitors have only recently become price competitive.

**PRO’s**
More reasonable cost ($650 vs. $1,800)
Provides complete 8.5 x 11’ interaction

**CONs:**
Requires dual video cards
Requires own power supply and USB port for pen

Estimated Hardware Cost (per unit) $650.00
Bedside Options? Cart required?
Option 5: Tablet/Slate or iPad (iPadlike device)

This is a wireless device (or can be used in offline mode and then “docked” for upload. All the documents are presented to the device for signature by the patient. They interact with each form and complete them one by one. When they are finished, they return the device to the registrar who then clicks on “witness” for completion or signs them manually.

**Pros**
- No need to print forms prior to seeing patient
- Single handoff and patient can work with entire form set (not one at a time)

**Cons**
- More expensive than ClipGem
- Sought after device…the security case should discourage theft
- If patient requests copies, they must be printed and someone must then return them to
- Will require docking station/keyboard, scanner (thus the cart) if device is also used to register patient
- Requires registrar hand device back and forth to patient for signature and batch witness
- Estimated Hardware Cost (per unit) $800.00- 2,000.00
Option 6: Convertible Pen Tablet Laptop

Similar to # 5. Patients can be registered on the device, then the device can be converted to the tablet mode and the documents are presented to the device for signature by the patient. They interact with each form and complete them one by one. When they are finished, they return the device to the registrar who then clicks on “witness” for completion or signs them manually.

Pros
• No need to print forms prior to seeing patient
• Single handoff and patient can work with entire form set (not one at a time)

Cons
• Costly device
• Sought after device…the security case should discourage theft
• If patient requests copies, they must be printed and someone must th
• Will require card scanner (thus the cart) if device is also used to register patient
• Requires registrar hand device back and forth to patient for signature and batch witness

• Estimated Hardware Cost (per unit) $1,500-2,000
Option 7: Kiosks with integrated signature pad

While Kiosks can be a whole discussion on its own. This presentation will simply address the electronic signature component. Most kiosks will have a touch screen that allows a patient to navigate screens, view and correct information. However, most kiosks touch screens don’t do a good job of handling signatures so they will have a separate signature pad. The documents to sign will appear on the touch screen and as patients sign, the signature will show up on the touch screen device.

Pros
• Integrated solution for check-in, registration, etc.
• Integrated e-sig and signature can be displayed on device

Cons
• Costly device
• Kiosk software can be difficult to navigate, Kiosk Concierge
• If patient requests copies, they must be printed and someone must then return the
• Other issues related to self service devices

Estimated Hardware Cost (per unit) $4,000-8,000
Questions

- Contact:
  - Lee Remen
  - Regional Sales Director
  - O) 847-649-5116
  - C) 630-870-9928
  - lremen@healthwaresystems.com