EDRS Remote Attestation Case Study

Physician participation in California's Electronic Death Registration System is completely voluntary. 99.8% of the physicians choose to attest electronically, and 86% receive their attestation signature request by fax vs. 14% use online login.

I. WHY REMOTE ATTESTATION?

Medical professionals attesting to the cause of a person's deaths are busy. They frequently move among various clinical venues. Getting the correct document processed by the correct person is an onerous task for everyone involved.
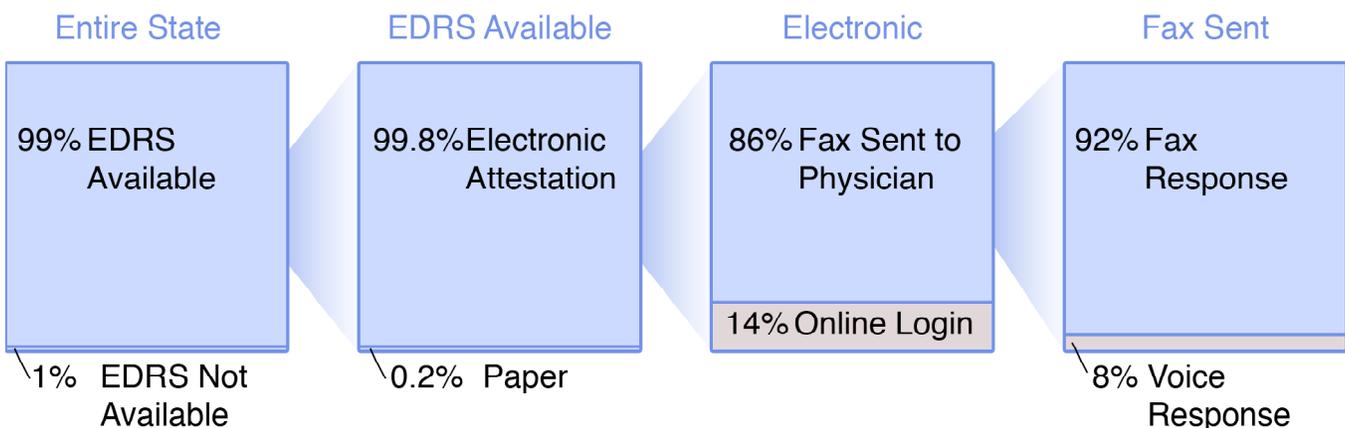
Prior to Remote Attestation, a typical California funeral director spent $100 per death to obtain the signature of a medical certifier. Physicians and vital statistics agencies wasted time chasing paper. While processing delays ensued, sometimes for months, government welfare agencies continued to send checks to deceased persons.

California recognized that enormous potential savings could be realized if a Remote Attestation system were widely accepted. It would save time and money for medical professionals, funeral directors, and government.

II. CHARACTERISTICS OF A SOLUTION

The State of California decided to solve the Remote Attestation problem by enlisting the services of the University of California at Davis. UC Davis concluded that an EDRS Remote Attestation system required the following characteristics:

- Timeliness of death registration;

- No "sign-up" requirement and no added cost or complexity to the medical professional;

- No coercion; voluntary participation due to operational friendliness and ease of use;

- Flexibility as to evolving technology, information needs and legal mandates;

- Usefulness such that all customers are provided with necessary information;

Entire State	EDRS Available	Electronic	Fax Sent
99% EDRS Available	99.8% Electronic Attestation	86% Fax Sent to Physician	92% Fax Response
		14% Online Login	
1% EDRS Not Available	0.2% Paper		8% Voice Response

- Quality as to standard methods and data;

- EDRS Remote Attestation cannot be any more prone to fraud than paper systems.

After identifying these characteristics, UC Davis established a Remote Attestation plan.

III. IMPLEMENTATION

The California EDRS system went into a pilot phase in 2005, released to counties representing 6% of the deaths. Coverage was 44% in 2006, 94% in 2007 and 99% in 2008. The system included three options for Remote Attestation:

1. Electronic signature by fax

2. Attestation request sent by fax with physician response by voice recognition

3. Log-in name and password for direct approval in the EDRS On-line

The Remote Attestation by fax is now sending an average of 1500 faxes per day, and receiving 900 faxes per day. It performs the following tasks that previously required a person:

- Sends faxes to physicians' offices

- Receives faxes from physicians' offices

- Reads the EDRS document ID number

- Determines whether the form is signed

- Provides data back to the EDRS application

- Provides a safe long-term archive, including all faxes sent and received.

An innovative algorithm determines whether an Attestation form is signed. This involves an image processing sequence that starts with reading the EDRS ID number on the form, automatically rotating the image as needed, positioning the form tolerating clipping, skew, offset, and stretch/scaling,

and lastly, determining whether or not the Attestation Form is signed.

The Remote Attestation system sends relevant data back to the EDRS database for each form received. If there is any question on the automatic processing of a fax, it is sent to a manual import queue for review by a person. All user functions are done at any desktop computer using just a web browser, like Internet Explorer or Firefox on any operating system (Windows, Macintosh, Linux). No user software needs to be installed.

IV. PHYSICIAN ACCEPTANCE

99.8% of the physicians who have EDRS available in California choose to use it! Key to attaining such high acceptance rate is Remote Attestation by fax. 86% of the participating physicians receive their attestation signature request by fax, and of those, 92% choose to respond by fax.

As a document in an "in-tray," a fax that requires review and approval simply fits into the physician's daily routine in a smooth and efficient manner.

V. CONCLUSION

The Acordex Remote Attestation implementation meets the characteristics of a solution defined by California and UC Davis. It provides a substantial advancement in the EDRS program in California by saving time and money for medical professionals, funeral directors, government, and others involved in EDRS. It is implemented at a reasonable cost and does not require any special computer knowledge on the part of employees who operate the system on a day-to-day basis.

Further information on the system is available at http://acordex.com and on the California project at http://edrs.ucdavis.edu/edrs.

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