

Use of Scribes

an Information Paper

*Developed by Members of the
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Ubiquitous in most literate cultures, scribes historically were employed to copy books or documents by hand. In recent times, emergency physicians (EPs) have rediscovered the scribe. EDs currently using scribes report that the addition of scribes to the patient care team can help increase efficiency (patients per hour) and billing by improving documentation practices,^{1,2} can increase physician satisfaction by enabling physicians to spend more time with patients and less time documenting,³⁻⁷ and can improve patient satisfaction by increasing physician time spent engaged in bedside interactions.³⁻⁵

Reports as early as the 1970's detail the use of scribes as a means to improve EP efficiency and emergency department (ED) flow.⁸⁻¹² Today, a rich market of scribe services exists, including private single doctor scribes, local programs, private regional services, and large national contract services. Since scribes may also be known as Clinical Information Assistants (CIA), Clinical Information Managers (CIM), or Physician Documentation Assistants (PDA), published information regarding how many EDs or hospitals currently use scribe services is limited, with one source estimating that 200 hospital EDs across the country use scribes, including community and academic departments.³ However, interviews with a handful of larger scribe services estimate that 400 physician groups at over 1000 hospitals are currently using contracted scribe services to document ED encounters, with many more using local or hospital-based scribes. They claim that the majority of ED scribe utilization still occurs amongst private EP groups at community hospitals, but that several larger physician groups and hospital systems are beginning to enter the market. Previously, larger groups and hospitals had been somewhat limited in their options simply due to the scribe volume they required compared to the number of scribes that could be trained and/or provided. With the growth of larger scribe services, more of these high volume departments are able to find services large enough to supply their needs.³

Role of the Scribe

Scribe candidates today often fall into two categories – those interested in or currently enrolled in pre-medical professional training, and “career” scribes with training as a medical professional [eg, registered nurse (RN) or medical assistant] or transcriptionist. Previously many scribes were RNs,⁹⁻¹² but today most are students in pre-medical, pre-nursing, physician assistant or nurse practitioner programs.¹³ Scribes in pre-medical professional training programs claim that the opportunity to gain “real-life” healthcare experience is valuable for their future professions.

In the context of the ED, a scribe is typically a non-clinical staff member whose role is to assist with clerical and other non-clinical duties. Duties are largely dependent upon local practices and hospital policies. However, in the most basic sense, scribes are hired to shadow physicians during their interactions with patients and act as transcriptionists or “personal documentation assistants” to contemporaneously document the history and physical exam as it is being performed by the ED physician. The physician dictates his/her findings while the scribe records the encounter in the medical record. If there are remarks that the physician prefers not to make in front of the patient, but wants recorded in the medical record, then this is relayed to the scribe outside the patient room. Documentation may be in any form (free hand, paper template, computer documentation, etc.), except for dictation. This includes recording of history, physical exam findings, medical decision making, procedures, results, progress notes, or other information relevant to the patient chart. The scribe may independently gather and document clinical information from other current or historical records, but must not interject their own opinions or interpretation. Before the conclusion of the patient encounter the physician reviews the medical record as written by the scribe for accuracy and makes any revisions before signing off.³⁻⁵

How scribe documentation is identified within the patient record will depend upon the type of documentation available and local policies. With hand written records the documentation is often signed by the scribe with a slash, listing the clinician name, similar to other legal documents in the business world (eg, Scribe Name/Physician Name). For computer documentation, scribes are typically given unique user name/password that identifies their entries and restricts access to other system features such as order entry. Some hospitals may require the clinician to review and acknowledge scribe documentation.

Scribes also may assist with other tasks that improve the efficiency of the patient encounter including recording laboratory, consultation, and radiology results, and prompting physician review as these results become available. They can also obtain and review previous records for comparison by the physician, assist with medication reconciliation, document procedures performed, act as a chaperone, and notify the physician if the medical record is incomplete.^{3,5} Others may act as a patient concierge (communicate patient need\requests, provide patient comfort - provide a pillow, food\drink, assist to restroom); provide communication assistance (manage phone calls, scan documents, print information from the chart, communicate with other healthcare providers) and provide procedure assistance (obtain supplies, setup). Depending on their hired purpose, scribes can also assist nurses with activities such as tracking down labs and other key results.¹ While ED scribes may perform duties beyond mere transcription of clinical data, it is vital that policies be in place to avoid breaching patient trust and the boundaries of medical practice.

Some facilities do extend the role of the scribes beyond transcription to include cross-training to perform ECG's, take vital signs, and even draw blood.¹⁴ These clinical functions should be reserved for those with formal medical training experience including medical assistants and RNs, and those that are hospital (vs physician group) employees in order to limit medicolegal risks.⁵ In many cases, direct patient care by scribes is not permitted.

Scribe Training

The training for scribes provided by scribe companies is intensive and time-consuming, with some formal scribe training programs requiring approximately 100 hours of both classroom and practical on-site training.³ Didactic training includes medical terminology, professionalism, phone and bedside etiquette, charting and coding guidelines, electronic medical record use, and laboratory and radiology system access. Practical training is carried out at the bedside by directly observing scribe documentation. Scribes should have appropriate identification so as to not confuse them with the healthcare provider(s). Most programs begin with 100% review of trainee charts, then decrease review as the scribe trainee becomes more proficient. If employed by the hospital, scribes also receive standard employee training [eg, Occupational Safety & Health Administration (OSHA), Health Insurance Portability and Accountability Act (HIPAA), safety]. Currently there is no standardized national test or certification of scribe proficiency. Ultimately, the physician is responsible for the provider contents of the medical record.

Economic Considerations- The Business Case for Scribes

It has been well documented that emergency physicians spend approximately half of their time on indirect patient care activities, primarily charting and record-keeping.¹⁵ The economic benefit of a scribe program therefore comes in large part from freeing the physician from some of this indirect time burden and enabling him or her to see additional patients.

Return on Investment

A key aspect of the decision to implement a scribe program in an ED is its net cost. Unfortunately, the literature addressing the return on investment of scribe programs is scant. Most studies have been conducted in academic institutions, and may not be generalizable to other practice environments.¹⁶ Obviously, the net cost or benefit of scribes depends upon a number of factors. Two important factors affecting the cost effectiveness of scribe programs are the reimbursement structure of the EM group staffing the ED and the documentation system being utilized. In general, the net benefit of a scribe program will be the greatest in the EM group that is paying its providers an hourly rate and not using a templated medical record system. Paying providers in proportion to *documented* relative value units (RVUs) often results in better patient care documentation than when providers are paid on an hourly basis, leaving less room for improvement in documentation with the addition of scribe services. Similarly, templated medical record documentation systems encourage inclusion of the necessary content to satisfy the coding criteria required for a particular charge level. Scribe program benefits will produce the highest return on investment in EDs where charting is non-templated, or excessively time consuming, such as when an electronic medical record is utilized.

Scribe program cost varies to some degree with geographic location (ie, cost varies inversely with proximity to those who wish to work as scribes, such as pre-medical professional training programs). The hourly rate paid to scribes has been reported to vary from \$10 to \$20 per hour^{5,17} to \$20 to \$26 per hour,³ with a chief scribe (liaison to contract scribe company and physician group) earning an average of \$14 to \$16 per hour.¹⁸ Based on an informal sample of twenty existing scribe programs, EM groups who develop their own programs pay on average \$16 per hour for scribe coverage, compared to \$18 per hour for EM groups who out-source the program to professional scribe companies. Both hourly rates include base pay and benefits, as well as recruiting, training and administration costs. For the purpose of ROI calculations, the latter hourly cost will be utilized.

Unpublished proprietary data (Hospital Practice Consultants, Ronald A. Hellstern, MD, Principal) from a sample of 17 independent EM groups who implemented scribe programs reveals the following performance measures. EDs in this cohort are non-academic, community facilities with an average of 50,000 visits/yr, and are staffed by independent EM groups. Providers use templated ED documentation systems and receive 100% RVU-based compensation.

	<u>Pre-scribe</u>	<u>Post-scribe</u>
Mean RVUs/pt	2.9	3.1
Mean pts/hr	2.1	2.3
Mean RVUs/physician hr	6.09	7.13

Thus, on average, these EM groups experienced a 17% increase in provider productivity after implementation of scribe programs. Assuming an average cost of \$16 per scribe hour and using the 2011 EM conversion factor of \$36.08 and Medicare payment rates, this represents a return on investment of \$18 per hour (ie, greater than 100%).

Other studies have also reported increased revenue with scribe program implementation. Arya, et al reported an increase of 0.24 RVU's per hour per 10% increase in scribe coverage.¹⁶ Another institution reported a 15% average charge increase of \$42 per visit by implementing a scribe program.² In the non-academic EM literature, billing increases of 10%,¹ \$32/hour increases in charges with 10% scribe coverage (based on charges of \$400/pt),⁵ and estimated revenue gains of \$50 to \$60 per hour have also been reported.³ It should be noted that these increases do not consider the improved patient and provider satisfaction which may also have additional economic benefits.¹⁹

The addition of variable costs should also be considered when performing ROI calculations including the possible need for additional computer terminals and software, administrative stipends for onsite staff/physician supervisors, and potential scribe “fringe benefits” (ie, parking, ‘scribe lounge’, etc.)

Payment Models

Several models exist regarding payment for scribe services. In some EM groups where physician pay is productivity-based, the entire cost of the scribe is deducted from the physicians’ compensation. However, since revenue gain is also enjoyed by the group, the cost of the scribe may also be apportioned between the provider and the group. Some hospitals also share in the cost of the scribes. In general there is a 3:1 ratio of hospital revenue to EM group revenue, so a hospital would typically benefit 3 X \$37.52, or \$112.56/pt (less some incremental staffing cost) as a result of an EM group’s implementation of a scribe program.

EHR Factors

Recent federal legislation has created incentives for implementation of electronic health record (EHR) systems. Upwards of \$30 billion dollars are available for the program, or \$2 to \$10 million dollars per hospital for “meaningful use” (MU) of EHR technology. MU is the term used to refer to the federal government’s criteria for deciding if healthcare organizations are employing sufficient components of EHRs to warrant payment of federal Health Information Technology for Economic and Clinical Health (HITECH) Act dollars which were appropriated in the American Recovery and Reinvestment Act (ie, “The Stimulus Bill”).^{20,21} Of the 14 MU Core Measures, emergency physicians can contribute to 9 of them, including computerized physician order entry (CPOE), drug-drug interaction and drug-allergy alerts, and computerized discharge instructions.²² MU funds are to be paid in three stages (I, II, III) with the specific criteria for stages II and III still being finalized. It is unclear at this time if information and data entered by an ED scribe will be considered appropriate per MU criteria. During a presentation at the 2010 American College of Emergency Physicians section of Informatics (SEMI) meeting, Dr. David Blumenthal (then Director of the Office of the National Coordinator for Health Information Technology)²³ was asked whether documents created by scribes were valid to meet MU criteria. He said “no,” and gave a rationale that the intent has been to give credit only for instances of direct provider-machine interaction, and as such non-clinical intermediaries did not qualify. Policy about defining MU criteria is ongoing, with an opportunity to provide public commentary available on the ONC website.²³ Some commentary supporting the use of scribes has been made, but a ruling regarding the use of scribes with regards to MU policy is unclear at this time.²⁴

Some have argued that as electronic health record systems become standard data entry models in healthcare delivery systems, that scribes will no longer be necessary.⁴ However, studies have reported that physician time spent providing direct patient care and productivity decreases as a result of transitions from paper to computer documenting,²⁵⁻²⁸ likely because physicians can’t simultaneously communicate with the patient and use the computer.²⁹ In addition, the true cost of EHR implementation, when lost productivity is factored in, can easily reach into the six figures per physician.³⁰ In such circumstances the return on investment argument for scribe programs may become more compelling.

Implementing a Scribe Program

There are many factors that go into choosing which type of scribe service is best for an individual department or group. The following are just a few:

- What hospital, department or EM group resources are available to pay for, train, and manage the scribe program?

- Will the scribes be paid by each individual practitioner, by the EM group, or by the hospital?
- Is there a physician or staff member able and willing to provide administrative oversight, manage quality control issues and train scribes?
- Does the department want the responsibility to develop, implement and maintain a program; or, prefer to outsource at an increased cost?

Outsourced Scribe Programs

A handful of national and regional contract scribe programs (<10) currently exist to staff EDs. The largest is believed to provide scribe services to twenty states. The services provided by these companies are structured slightly differently. Some contract with a hospital or group to provide all scribe services (administrative, benefits management, scheduling, etc.), while others perform more like headhunter services (ie, assist in hiring scribes for the group or hospital, who then takes over all management responsibilities for the scribe employee). Training of scribes also varies between companies. While some simply require initial “certification” (ie, completion of an interview with a recruiter) others require scribe employees to complete formal didactic and bedside training with practical and written examinations, participate in continuing medical education programs (some with educational stipends), and undergo recurring evaluations.

Costs vary greatly for contract scribe programs, but appear to be based on location, needs of the department, and the nature of the services provided by the company. Some companies offer services with no up-front/setup fees, but these companies tend to charge higher hourly fees and require greater client administrative responsibilities. In contrast, other companies that may charge setup or monthly fees often provide most of the scribe program administrative support and tend to charge a lower hourly rate for services.

“Home-Grown” Programs

Some groups or departments opt to manage their own scribe “program.” Local and “home-grown” programs vary as much, if not more, than contract companies because they are each designed for an individual niche. Some larger local programs are administered in a manner similar to the contract scribe companies, with formal training, performance improvement, and oversight. Meanwhile, other “programs” are as simple as allowing each individual physician to hire personal scribes who fit their personal needs. Costs vary based on the structure of the program, as well as whether the scribes are paid by the individual physicians, the hospital or group, or both.

When developing a “home grown” program, the number of scribes required and the total cost of implementation must be carefully considered. For 100% physician shift coverage, a general rule of thumb is to hire twice as many scribes as there are full time physicians. Hourly rates vary significantly, but in some areas can be as low as \$8 to \$10 an hour with no benefits for part time scribes.³ For full time scribes, benefit costs may range from 8-25% of total costs depending on hours worked and benefits offered. In addition, the administrative costs to train, credential, supervise, and manage scribes must be taken into consideration.

Average training requirements for most surveyed scribe practices range from two to ten days per scribe. Some reports claim that the recidivism rate of scribe training is as high as 25%¹⁸ to 40 %³ as a significant number of applicants are unable to multitask or learn the challenging medical terminology or coding information necessary. The difficulty of attracting and hiring qualified candidates (including pre-medical professional students) in remote areas and areas without colleges or universities nearby^{3,5} may present further challenges to hiring a full complement of adequately trained scribes.

Case Reports of “Home-Grown” Scribe Programs

While detailed guidelines regarding development of a “home-grown” scribe program are beyond the scope of this paper, much can be inferred by examining two successful existing programs.

Case 1: A 125,000 visit urban/suburban ED in the Northeast with 45 EPs starts a scribe program. EPs receive only productivity-based compensation. One EP serves as the “Scribe Coordinator” and is given protected time to train and supervise hospital credentialing of scribes and manage the program operations. Scribe training consists of 2 days of classroom instruction, followed by 2 days of physician shadowing. For each shift, EPs choose if they want scribe assistance for which the EP is charged \$15/ scribe hr (\$3 is paid toward maintenance of the scribe program and scribes are compensated \$12/hr). Scribes are employed by the hospital, and do not receive benefits. The program began with 6 pre-medical undergraduate students, and has grown to over 50 trained scribe employees. Currently, all but one EP uses scribe assistance during at least 1 shift/month. Overall, EP satisfaction has improved because of increased documentation efficiency but only slight gains in their billing productivity have been actualized. The cost of scribe training, leadership, and oversight for the program accounts for approximately 25% of the total cost of the scribe program.

Case 2: A 60,000 visit suburban academic ED in the mid-Atlantic region starts a scribe program. The program began with 5 scribes assigned to 2nd and 3rd year residents. Responsibilities included charting, tracking test results, obtaining outside records, and EHR training. The program has grown to 50 scribes, with strong resident satisfaction with regards to work flow and learning. On average, charges increased \$35 per scribed chart and \$64 per “express care” (low acuity) patient chart. Though this billing differential has not entirely covered the cost of paying and training the scribes, the program has been deemed a success by its creators in that it has improved patient flow, increased physician time at the bedside, improved resident morale, and expanded the staff comfort with the department’s EHR. The program has been expanded to allow for scribes to directly assist with faculty research within the department.

Not all scribe programs succeed. Working efficiently with a scribe is something of an art and some physicians may not be comfortable being shadowed during every patient interaction. Reasons for past program failures include, hiring scribes with an inadequate aptitude or education level, an insufficient pool of local scribe candidates, inadequate training prior to being put on the job, and provider-scribe incompatibility.

Conclusion

Although the use of scribes in the ED has been described for over 35 years, the challenges of ED crowding and national pressures to implement EHR systems have renewed interest in this ancient profession. The information presented in this paper is intended to inform those who may be considering the use of scribes as adjuncts to the ED patient care team.

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