

Back-end  
Speech Recognition  
Implementation



BEST PRACTICES

# Back-end Speech Recognition Implementation Best Practices

---

We extend our sincere thanks to the following individuals who participated in the creation and review of materials in this best practices tool kit:

## **AHDI BESR Task Force:**

Kirk Calabrese, CMT, MA  
Sherry Doggett, co-chair  
Janice Jones  
Patt King, co-chair  
Danielle Lentz  
Sarah Spoelman, CMT  
Daysha Weller, RHDS, AHDI-F  
Dori Whittaker  
Tina Wilson

## **Expert Reviewers:**

Leigh Anne Frame, CHDS, AHDI-F  
Ardyce Heffernan, CHDS  
Melissa Roerig, RHIA  
Maria Stahl, CHDS, MBA  
Kristin M. Wall, CHDS, AHDI-F  
Lee Ann Wilmot, CHDS, CHTS-CP, AHDI-F

---

Association for Healthcare Documentation Integrity (AHDI)  
4120 Dale Rd., Suite J8-233  
Modesto, CA 95356  
(800) 982-2182  
[ahdi@ahdionline.org](mailto:ahdi@ahdionline.org)  
[www.ahdionline.org](http://www.ahdionline.org)



# Table of Contents

Organizational Readiness.....	3
Introduction .....	3
Determine Organizational Readiness .....	3
Setting Goals and Expected Outcomes .....	3
Determine Foundational Costs .....	4
Have Realistic Expectations .....	4
Vendor Considerations .....	4
Develop an RFP for Choosing the Best Option.....	6
Information for the RFP .....	6
Involve Your IT Department.....	8
Engage Your Medical Transcription Service Organization .....	9
Determine compatibility .....	9
Check Vendor References .....	10
Develop Contract and Support Models .....	10
Implementation Planning & Operations.....	11
Introduction .....	11
Know Your Purchase Options.....	11
Subscription model .....	11
Capital purchase.....	11
Technical Considerations .....	12
Facility-Hosted Solution .....	12
Off-Site-Hosted Solution .....	13
What to Provide the Vendor .....	13
Project Management .....	15
Healthcare Organization Model.....	15
Vendor/MTSO Model.....	15
Develop the Best Implementation Plan for your Organization .....	17
Engage Healthcare Documentation Staff.....	21
Develop an Outstanding Training Program.....	23
Develop an Appropriate Compensation Model.....	25
Line Counting Methodology.....	25
Budget Considerations.....	25

Production Review .....	26
Ongoing Evaluation and Adjustment of Compensation Models.....	26
Vendor Relationships .....	28
Determine Release of the Draft Text .....	29
Dictation Habits and Turning on the Draft Text.....	29
Releasing Draft Text to HDSs .....	29
Develop a Style Guide/Guidelines for SR Editing .....	31
Evaluating Progress.....	32
Introduction .....	32
Data Reporting .....	32
Reporting Best Practices .....	32
Data Reporting .....	32
Monitor Progress .....	33
Conclusion.....	36

# Organizational Readiness

## Introduction

When a business is considering implementing any type of new technology it can be both exciting and daunting. It takes a lot of time, knowledge, research, money, and effort from many people to get from Point A to Point Z successfully. Taking on a project of this magnitude won't be easy, but it can be done and done well. The overall project management will be key to staying on track, not forgetting any steps, and keeping the project moving. As with any big project, there may be unexpected delays or circumstances encountered, but with the right planning and the right people to see the project through, these obstacles can be overcome.

It can be a long road to travel, but the goal of this *Back-end Speech Recognition Implementation Best Practices* tool kit is to help your organization think through the steps and processes, from planning through implementation and into the maintenance stage, to make the transition a bit easier and with a successful outcome.

## Determine Organizational Readiness

### Setting Goals and Expected Outcomes

As your organization is readying to implement either front-end or back-end speech recognition (FESR or BESR), or both, it is extremely important to have well-defined goals and expected outcomes mapped out. Begin your discussion by considering the answers to the following questions from both administrative and departmental standpoints:

- Do we want to increase our volume of work but do not currently have appropriate staffing?
- Do we want to implement a speech recognition program to reduce cost and decrease staff through attrition?
- Do we want to decrease the outside service cost and increase in-house volumes with our current staffing model?

A checklist of why the organization is doing this and what the goals are for the implementation of speech recognition along with their expected outcomes will be a starting point for internal conversations to ensure that all parties involved are "on the same page." More defined goals can be set once speech technology vendors are identified, but it is important to have at least a realistic idea of why all parties involved want to implement speech technology.

## **Determine Foundational Costs**

To determine more well-defined goals before vendors are involved, it is critical to assess your current cost per line (cost/line), which should include all salaries (vacation, paid time off, sick time, and benefits if required). You may consider any other costs that your organization has such as current technology cost and support contracts. This cost/line determination may be different in various healthcare settings, so it is important to define from both the administrative and departmental points of view so nothing is forgotten or overlooked and so all parties have the full picture from the start. Knowing your baseline cost will help determine what vendor model works best for your department budget and overall organizational finances. When looking at various models, also consider if you will need additional staff to manage the technology (this may either reside in the healthcare documentation department or information technology (IT) department depending on your organizational structure).

## **Have Realistic Expectations**

It is important to understand what speech technology can and cannot do. Back-end speech recognition (BESR) is often expected to double staff production, but this will vary depending on the dictator, the staff member, and the vendor product. Be realistic in your goal setting. Not every clinician is suitable for BESR. As your organization performs an assessment of the various vendor systems, ensure flexibility when setting the speech draft threshold for dictating providers to allow for proficiency of the individual healthcare documentation specialist (HDS)/medical transcriptionist. For example, HDSs who are high producers using traditional transcription may find their production decreases when attempting to use BESR. We'll talk more about this later.

## **Vendor Considerations**

When determining which vendor will work best with your organization, there are several items to consider. First, research which vendors are available. There are numerous vendors offering their platforms to you and each has different idiosyncrasies. In order to learn more about these vendors, take full advantage of your AHDI networking capabilities to gain insight of the pros and cons of each vendor. If available, you may want to explore possible networking through AHIMA and review KLAS reports.

Once you have narrowed down the choices, it is imperative to set up product demonstrations that show the full capabilities of the platforms. Be sure to invite all key players for this demo! These would include the project coordinator, pertinent executive staff, physician champion(s), performance managers, IT team, and other members of your staff from appropriate departments. When evaluating these demos, it is essential that the vendors show all the features you would be using, how they work, and that they contain all the functionality your organization needs. This includes not only how proficient the system is but also how robust the reporting capabilities are.

If your transcription system requirements are clearly documented and can be translated into a Request for Proposal (RFP), many facilities take the approach of sending the RFP out to vendors to ensure the vendor qualifies before coming in for a demo. If there are any "must haves" on your list that a vendor has responded negatively

to, decide whether it is worth having them come in to demo their product or not. The actual vendor demonstration should follow the outline of the RFP questions, as the intent is for them to demonstrate how they will meet your needs.

If your transcription system requirements are not clearly documented, there could be benefit of having vendors come in to provide a high-level demo, the information of which can then help you build out your requirements and create an RFP.

Once you have the knowledge about what the vendors have to offer, send them your RFP. They will let you know whether they can comply with your requirements. A followup vendor demo may be needed to answer further questions about the product and how it would work with your organization's setup.

## Develop an RFP for Choosing the Best Option

A well-prepared Request for Proposal (RFP) will identify and outline required elements needed for implementing BESR. Determine financial options for each vendor and understand the impact on both operational and capital budgets. This will aid your organization and the vendor in understanding the needs to be met for ruling a product in or out.

### Information for the RFP

There are a lot of moving parts and pieces of the puzzle to be considered. The more detailed your RFP, the more information you'll have with which to narrow down your choices and make decisions based on what will best fit your organization's needs. Having all your questions answered and determining the right questions to ask is paramount. Don't hesitate to ask for a sample vendor business contract. The following is a suggested list of questions for inclusion in the RFP:

- Is the BESR system compatible with your electronic health record (EHR)?
- What hardware is required (e.g., servers, PCs)?
- Is the BESR system cloud-based?
- What is the broadband requirement for remote staff?
- What software is required?
- What secure connections or interfaces may or may not be required?
- What are the offerings and differences for individual dictator licenses vs. global licenses?
- What are the details and options for paying a vendor by a recognized line for use of voice technology?
- What are the details and options for buying the technology outright and managing it internally, as well as the option for buying the technology but having the vendor manage it? Ensure the costs to do so are clarified.
- What services does the vendor offer, such as managing context list or servers? Determine how future updates would be provided and the associated cost.
- Who will provide the support contract and associated cost for Tier 1, 2 and 3 support models? Who is responsible for what? Obtain a sample support contract for review by your departments including IT.
- What vendor support is given during implementation and the post go-live period? Determine when the service contract period starts following the go-live period.
- What additional costs may be associated with the implementation?
  - Determine vendor support during implementation, if it is onsite or remote, for how many days, cost/day, etc.
  - Determine travel expenses such as airfare, hotel, and per diem for vendor staff if onsite support is required.
  - Determine training costs. Costs will vary by model, onsite vs online, training the trainer, etc. Ask for copy of training materials and determine if they are editable to include organization-pertinent information.



- Determine any outsourced costs related to training or IT support that may be required.
- Determine any additional transcription outsourcing cost that may be required while staff are training and testing.
- What are the staff costs if supporting a context server internally?
- What is the project timeline? Ask the vendor for a sample copy of an implementation plan.
- How many post go-live reviews post implementation are included?
- Does the RFP match up with the vendor's demo (what you see is what you get)?

## Involve Your IT Department

You will need your IT department's involvement. Your IT analyst or other IT representative will be able to approach this project, especially in the early stages, from a different, more analytical perspective than one of transcription.

IT should be consulted regarding interfaces, VPN tunnels, and hardware and software requirements (including third-party software) for any new servers needed for hosting in-house BESR, a test system, and deployment.

Additionally, your IT analyst should be included in:

- Researching BESR vendors.
- Vendor demos.
- RFP process.
- Weekly calls during implementation.
- Installation.
- Go-live.

Obviously, if you host your own BESR server, you will need more IT resources to manage everything. You'll need to allocate servers, disk space, and PC support. And you'll need to ensure that a transcription department representative can access and update the BESR vocabulary regularly.

The IT department may feel one vendor is better than another simply based on ease of implementation, but remember to keep the big picture in mind; weigh the pros and cons across the board to determine which product will best suit the overall needs of the organization. Articulate with data findings (networking will help in this endeavor) why one speech engine may be better than others for optimal long-term results, even though the implementation process may be more intricate or take longer.

## Engage Your Medical Transcription Service Organization

If you use a medical transcription service organization (MTSO) for overflow, it is important to also include them in the conversation when deciding on a BESR program. This may take several discussions depending on how you use your MTSO. One of the first things to consider is if the MTSO works on your platform or if you send voice files and patient demographic data to them. If they do not work on your platform, another item of discussion would be if the MTSO uses BESR. If they do, it would be a good idea to research that same technology product to see if it would be prudent for use at your organization as well.

### Determine compatibility

If the MTSO does not use speech recognition technology (SRT) or you determine that their system would not work for your organization, the next question to ask is if you want the MTSO to work on your platform or not. The second half of that question is if the MTSO would be willing or able to work on the new platform you decide on. You'll want to know if the technology they use is compatible with yours. Oftentimes the interfaces are interoperable, but be sure to determine if any systems would need to be redone. If so, consideration must be given to the costs of such work and equipment.

If your MTSO is not willing to work with the platform you have decided on, a new set of questions arises. Would you need to look at a new MTSO? If so, what are the contract ramifications? If there is an "out" clause, those terms will need to be discussed as well. Will a new platform be required if it is decided to keep your MTSO? To make this easier, discuss platforms that your MTSO is capable of working with early on to avoid having to start back at square one. This could be a detriment to the project in that it could increase costs, require in-depth administrative involvement, and lengthen the project timeline.

If the decision is made to change MTSOs, work with your BESR vendor to determine which MTSOs they have worked with successfully in the past. They should be able to provide you with contacts to research and determine an MTSO that is compatible with your organization.

If you continue with your same MTSO, review the contract to:

- Determine if the MTSO requires a monthly minimum volume to guarantee a set rate/line. As work volumes sent to the MTSO decrease, consider if your line rate may increase.
- Negotiate a new line rate for speech edited documents if MTSO is working in your platform.

It is recommended to maintain a good relationship with your MTSO even if your goal is to eliminate use of an outside service. Consider attrition, PTO, holidays, or sick time when you may need a service as backup. If you decide not to use the MTSO, review your contract to determine the required notification timeframe. It is a good business practice to give your MTSO notice and otherwise maintain good communication.

## Check Vendor References

Part of ensuring a good outcome comes from knowing all you can about the vendor with whom you're working. Do your homework and develop a list of standard survey questions to ensure that you are asking consistent questions of each possible source. Involve your IT department, administration, and others in the development of your survey. Phone call surveys are often preferred. Also, talking directly with other healthcare organizations will assist in providing a more robust overview of each vendor.

- Check references on the vendor-provided customer list.
- Check references not on the vendor list by networking with other managers through AHDI listserv, AHIMA, and other professional contacts. This will provide a 360-degree view of how the vendor's technology works in multiple settings.
- Check KLAS scores.

### SAMPLE REFERENCE SURVEY CHECKLIST

## Develop Contract and Support Models

While researching BESR vendors, it is important to keep in mind how the product will be supported once implementation has been completed and your organization has signed off on the project. Most vendors have several support options such as 24/7 coverage, business hour coverage (and possibly a higher rate/hour for after hours and weekend calls), or pay as you go. This should be discussed in detail and spelled out in the contract. Determine the following:

- Who is the contact person(s) for support/issues?
- What is the escalation process and timeframes for each point of the vendor escalation process once your organization has decided to call in the vendor? Will penalties be incurred if the vendor fails to respond within an outlined timeframe?
- Who performs maintenance of the SR dictionary?
- What support will be provided in-house by your organization?
- What is the procedure if the system is not meeting requirements once implementation is completed and support contract is in effect?
- What is the expected uptime and/or acceptable downtime? With expected uptime, organization may determine what modules of the system must be up and running and what is acceptable to be down during an emergent issue.

# Implementation Planning & Operations

## Introduction

An implementation plan is a management tool designed to illustrate, in detail, the critical steps in developing and starting a project. It is a guide or map that helps program staff be proactive rather than reactive in developing their program and identifying any challenges along the way.

Developing a project implementation plan will require a lot of thought and brainstorming with your teams, but by having everyone refer to a common document, program managers and directors can be sure that program intentions and goals are interpreted consistently by all staff and not subject to individual interpretation. The implementation plan should be reviewed in staff meetings and updated as necessary. It is a guide for developing the program and planning for the piloting of the new BESR program.

## Know Your Purchase Options

There are several back-end speech recognition models available to your organization. These will differ from vendor to vendor and consideration must be given to what best fits your organization's budget, both capital and operating, IT department requirements, and which BESR technology best fits your organization's needs and objectives.

### Subscription model

BESR can be purchased as a subscription pay-per-line model, which would include not only the BESR technology but also the ongoing support of the technology. The subscription model must be carefully evaluated given that the cost-per-line support model would need to be included in the healthcare documentation budget in addition to salaries and other items required.

### Capital purchase

BESR can be a capital purchase. In addition to the capital purchase of the technology, the organization would purchase the required hardware and ongoing support for the technology. The organization may wish to support the context server or consider additional dollars for vendor support.

## Technical Considerations

### Facility-Hosted Solution

A facility-hosted solution would encompass the hospital actually having physical control of the servers.

Sample servers for a facility-hosting BESR platform:

IP Address	Server Name	Description
190.XXX.XX.XX	ABCDEFDBS01	DB Server
190.XXX.XX.XX	ABCDEFAPP01	Application Server
190.XXX.XX.XX	ABCDEFMAGICB01	Interface and Speech Engine
190.XXX.XX.XX	ABCDEFCONTEXT01	Context and Recognition Server
190.XXX.XX.XX	ABCDEFCOMMCT01	Communication/Dictation Manager
190.XXX.XX.XX	ABCDEFTESTTST01	TEST Server

### Considerations for a Facility-Hosted Solution

- Server sits behind the hospital network's firewall and would be easily accessible by facility IT personnel.
- Facility IT may have administrative rights to set up user accounts on the platform and may have access control to set account permissions.
- Facility IT would have administrative rights to manage the Natural Language Processor (NLP) or context server can do so in a timelier fashion.
- Facility can ensure that there is redundancy and backup.
  - If the facility does not have redundancy, a lack of redundancy could be an issue, which could lead to longer periods of downtime. For example, if the hospital's ISP were to go down, nobody would be able to access the platform. If hosting was from a data center, the data center would have alternate ISPs that they could roll over to in the event of an outage.
- Onsite healthcare documentation staff would likely *not* be required to connect to a VPN to access the platform.
- Remote healthcare documentation staff likely *will* require a virtual private network (VPN) to access the platform. If a VPN is required, it may cause latency while editing in the platform. For example, a common complaint for those experiencing latency is that character output is not keeping up with keystrokes, the platform freezes, or navigation between screens in the platform takes a long time.
- Discuss details with the facility IT networking department if a VPN is required for connection to the platform. Access to websites or the Internet may be restricted depending on how the VPN is configured. This means that your staff may be able

to work on the platform but e-mail will not work nor would it be possible to do research on the Internet.

- Platform vendor will need remote access to the server in case technical support is required.

### **Off-Site-Hosted Solution**

Off-site hosting would include instances where the server does not physically reside at the facility. The server may reside at the physical location of the platform vendor or the server may reside at a datacenter that the vendor owns or rents.

#### ***Considerations for an Off-Site-Hosted Solution***

- Greater redundancy could be possible. For example, if an Internet connection goes down, another connection can be established through a backup ISP. Also in the event of a power outage, generators would come online to maintain power.
- Data centers have 24/7 support, which means if something does go wrong, usually downtime can be averted. This translates to less platform downtime, which would otherwise adversely affect medical authors and healthcare documentation specialists.
- Vendor manages the context servers; therefore, dedicated facility resources are not required.
- VPN use would be unlikely.
- Facility IT may not be able to create accounts or modify permissions if the platform vendor is hosting.
- Facility may not have the ability to manage context server.
- Requests for new account creation (such as when a new physician or healthcare documentation specialist requires access) will likely need to be submitted to the vendor.

### **What to Provide the Vendor**

The facility implementation team will want to provide the vendor with information in regard to the current workflow and technical requirements. The list of what to provide would include things such as:

- Work types along with sample reports.
- Sample reports for difficult dictators (if the platform vendor is an MTSO who is going to provide transcription/editing services).
- Sample admission, discharge, transfer (ADT) and transcribed result messages (e.g., lab tests, procedures, anything happening to patient).
- Sample patient demographics information.
- Endpoint IP address and possibly port numbers (provided by facility networking) if a VPN is required for remote HDSs.
- List of users requiring access to the platform for account creation and access control (e.g., physicians to dictate, HDSs to access voice files and editing platform, and managers to have administrative rights).

- In terms of medical authors, consider if some reports require a second signature by the attending physician.
- Medical author normals and templates along with work types for the associated reports.
- Decision regarding if HDSs, technologists, nurse practitioners, and others can create reports.
- Decision regarding if medical authors can dictate addendum reports.
- Any regional information or proper names to be programmed into the speech engine for better recognition (e.g., city names, street names, hospital names, pertinent flora and fauna).
- All pertinent healthcare provider names.
- Samples of word expander files (from programs different from what is built into the platform) to determine if they can be translated/transferred over. If they can, forward all expansion files to the vendor. You may wish to explore third-party word expansion products that have been successfully tested with the system.
- Specific hot keys being used for document navigation (e.g., quit report, upload report, jump codes in a report) to determine if the platform vendor may be able to integrate the same keys into the new platform.



## Project Management

When drafting a back-end speech recognition implementation plan, engage appropriate staff—content experts in their respective departments—early on who will need to be involved in the project. As information is gathered and decisions are made, build up your teams and other individuals to add to the project as needed. Be sure to identify people to lead each of these teams.

### Healthcare Organization Model

If the healthcare organization making a capital purchase or choosing a pay-per-line plan from the vendor will maintain their own healthcare documentation staff as back-end speech draft editors, project management will look quite different from the vendor/MTSO model. If the healthcare organization plans to maintain their healthcare documentation staff, they will see themselves as the driver of the project and will likely have at least one project manager from their IT department who will be in charge of the project overall. Some healthcare facilities may also have a project manager in their health information management (HIM)/healthcare documentation department who will work as a liaison between the facility's IT and HIM departments, and alongside the platform vendor. The platform vendor in this situation will also have a dedicated project manager who will work very closely with the facility project manager(s) to move the project forward appropriately and in a timely manner.

### Vendor/MTSO Model

In a vendor/MTSO model, the platform vendor should take responsibility of project management and assign a project manager who will guide and organize the associated groups for the purpose of completing assignments. These groups would include multidisciplinary teams representing the facility and vendor; examples of those teams could include the HIM department, operations personnel, transcription managers, quality coaches, IT application analysts, IT networking, platform developers, IT Interface team, and systems engineer.

The project manager is responsible for scheduling and conducting interdisciplinary meetings. Ad hoc meetings may also be scheduled for subgroups. It is recommended to hold weekly conference calls in which the project status and progress is discussed. An agenda should be set and followed each meeting. During a meeting the project manager may dismiss certain people or groups early if the content being discussed is not relevant. For example, during an interface discussion with IT, the decision could be made to dismiss transcription operations early. Plan your agenda accordingly.

Project duration will vary; however, expect implementation to take a minimum of three to six months after the project kickoff. Some implementation may take considerably longer depending on the size of the organization.

For the purpose of this paper, the terms "implementation planning" and "project" will be used interchangeably. The project represents the implementation plan in action.

If success is met with a specific project plan, then this plan can be used as a template for future implementations.

Following the discovery phase, the project can be divided into these stages:

1. Project Initiation
2. Full Analysis
3. Hardware and Workstation Setup
4. Application Configuration
5. ADT and Results Implementation
6. Go-Live Transition
7. Testing and Training of Pilot Group
8. Training of Staff
9. Go-Live
10. Project Closure

A sample project management plan, which can be modified for use with a capital purchase speech recognition solution or a vendor subscription solution (either facility or vendor hosted), can be found at this link:

[\*\*SAMPLE PROJECT MANAGEMENT PLAN\*\*](#)

## Develop the Best Implementation Plan for your Organization

As soon as possible after your project progresses from the RFP to the contract stage, begin considering how best to implement BESR at your organization. This process will be quite different if your transcription operation is onsite at a healthcare facility with or without a backup outsourcer, or fully outsourced with an MTSO. This process is complex and multifaceted and can be approached in many different ways, with each component in a different order than demonstrated below depending on your particular circumstances. Nevertheless, it is recommended that thorough and careful consideration be given to each of the following factors:

- **Project Staff Involvement:** Ensure all of the correct players are involved from the beginning and that additional appropriate staff are brought in at the correct stages. These include the facility and vendor project managers, IT staff on both the facility and vendor sides, EHR representatives when necessary, stakeholders from other facility or vendor departments as needed, representatives from other areas in your organization that will be directly affected by the conversion to BESR, managers, supervisors, leads, QA staff, training and resource staff, etc.
- **Physician Champion:** If you have not already done so, recruit at least one strong physician champion and provide them with education on realistic expectations for the project.
- **Business Best Practices:** Notify your MTSO of the impending change to determine how your transition to BESR will affect your business relationship.
- **Communication:** Carefully consider the time point at which you will announce the project to your HDS staff. Subsequent to the announcement, communicate, communicate, communicate—be as transparent as possible at all stages of the process.
- **Ongoing Staffing:**
  - Who on your staff will support the BESR system? Will this be a temporary or permanent position? Will staff need to be added? It is recommended that the person selected be an HDS or someone with extensive knowledge of dictation practices and not a member of the IT department (unless they have that experience).
  - Who on your staff will function as a trainer and/or staff resource? Example: Leads, supervisors, and QA staff. Will you need additional staff for training, resource, or QA audits? Will peer-to-peer training be an option, bearing in mind the impact to each HDS's productivity/compensation? Remember, training will be ongoing for some time to allow the best results for each staff member and for your facility.
  - If additional staff are determined to be required, consider your operating budget and take any necessary steps to ensure resources will be available as you need them.

- **Plan Timeline:** Determine the timeframe for your implementation and begin at least a tentative outline of calendar events to begin planning. When appropriate, share this calendar with key players. Keep it updated.
- **Global Standards:** Thoroughly evaluate the following for all work areas and strongly consider standardizing each of these as much as possible prior to beginning the implementation, particularly if your facility is large and has numerous disparate departments or areas. One of the things that will help in implementing BESR for your staff is to ensure as much standardization as possible before you go live.
  - Consider the environment where the application is going to run. If the application is installed locally on the workstation and the platform integrates with Word, it will be necessary to purchase a license for each workstation running the platform. If the application runs on a PC provided by the platform host, then word licensing and installation of the platform is done by the host.
  - Evaluate your workstations and computer hardware. Does everyone have the same level of RAM? Will different or additional monitors be required? If upgrades are needed, get them ordered to have on-hand as they are needed. Evaluate foot pedals and headsets as well and order if needed.
  - Obtain the name of the speech engine in order to rule out potential conflicts with other BESR software that may be running on the workstation. For example, if two platforms on the same PC use the same speech engine, there may be a conflict and software may not run properly for either platform.
  - Determine if there is a minimum broadband requirement for upload and download speeds for remote transcriptionists. If so, determine if the remote transcriptionist's systems meet those minimum upload and download speed requirements. Do your users connect virtually or through a VPN tunnel and, if so, does your network have the bandwidth needed to process voice and draft files efficiently?
  - Determine if there is a way to standardize work flows and document types to increase draft quality. What work types are you using? Can any be combined, shared, or eliminated?
  - Determine the turnaround times that are required to be met.
  - Outline all the templates you use. Is each one necessary? Do they need to be updated or changed? How will any new templates interact with the EHR?
  - Note what your organization's word expansion program is. Can each HDS's expander profile be transferred or uploaded to the new system or will you use an independent expander?
  - Determine if your current system has a method of creating "normals." If so, will each clinician's or HDS's "normals" be transferrable to the new software?

- Review other adjunct software you use (spellchecker, medical dictionary, Book of Style, etc.) to see if it can be transferred or uploaded to the new system.
- Review and update your healthcare provider list so it is current. It is recommended you take this opportunity to do a full audit and remove providers who no longer have privileges at your facility, per your credentialing department.
- Evaluate your remaining provider authors and put them into subgroups in order to determine where to begin rolling out BESR. Which ones might be more successful than others? Obtain advice from your vendor on dictator styles for better speech recognition outcomes. Example subgroups:
  - Structured dictators
  - Conversational dictators
  - Instructional dictators
  - By the specialty or by the work type dictators
  - English-as-a-second-language dictators
- Review your Quality Assurance audit process as it stands, compared to what will be reasonable during the transition to ensure consistently high quality.
- Consider carefully the Style Guide/Account Specifics. You may wish to create a team to evaluate/create your facility's Style Guide, taking recommendations from the vendor into consideration. *Close adherence to this Style Guide on the part of each HDS directly affects the level of success of your BESR program.*
- Evaluate any changes required in your compensation plan, be it based on productivity or hourly/incentive, and communicate these changes to your staff well in advance of their going into effect. You will likely need to develop new productivity standards over time as well. You may need to partner with your manager, director, Human Resources department, and/or compensation specialist to develop/change your compensation model. Remember to revisit this on a regular basis, as it is not a once-and-done endeavor, and productivity gains with BESR may continue to improve over time.
- Plan to update your job descriptions so they accurately reflect the new skill sets, productivity requirements, etc., either before or subsequent to implementation.
- Determine how progress will be reported to your staff as the project moves forward and what your continuous evaluation process will be like for them.
- Determine how the success of your project to your manager, director, and administration will be reported.

- **Pilot Group:** Based on the above, determine your pilot group to begin using and testing the software. These groups will include:
  - Healthcare provider authors who will most likely “pass” BESR at a level of X% (many vendors recommend 90%; you may decide otherwise).
  - Healthcare documentation specialists to begin editing after training. You may find your highest producers will not be the fastest editors or the most adept. Consider:
    - Those who are most amenable to change.
    - Those who are most technologically savvy.
    - Those with average to above-average productivity.
    - Those who learn quickly.
    - Those with a good work ethic.
    - Those with very good “hotkey” skills.
    - Matching an HDS learning to edit with their most common work types and/or specialties (in the beginning only).
- **Global Rollout:** Once BESR has begun, your pilot group is moving forward, and you’re working through any nuances or challenges, determine how best to roll out BESR to the remainder of your organization based on organizational goals. Consider:
  - Turnaround times (TATs) that need to improve.
  - High-volume work types.
  - High-volume dictators.
  - Specialties and departments.
  - Delaying dictators who use normals.

## Engage Healthcare Documentation Staff

It is important to communicate your organizational goals to your staff so they have an understanding of why BESR is being implemented. Staff may be anxious about these upcoming changes and the security of their positions. Reinforce that BESR is simply a productivity tool. Address all staff questions as they arise. One way of doing so is to start out by creating a Frequently Asked Questions (FAQs) list of what BESR will mean to employees and their workflow. Below are some example questions to get you started.

### **BESR FAQs**

- Q:** What is back-end speech recognition?  
**A:** BESR is a productivity tool that allows physicians to dictate normally then delivers draft text of the dictation and the voice file to the HDS to edit to a final and accurate document.
- Q:** Why implement back-end speech recognition?  
**A:**
- Q:** What are our organization's goals?  
**A:**
- Q:** Will this put me out of a job?  
**A:**
- Q:** What are the staff benefits?  
**A:**
- Q:** Will we get training?  
**A:**
- Q:** Will our pay change/what does compensation look like?  
**A:**
- Q:** How will my workflow change?  
**A:**

### **Consider emphasizing**

- The added benefits of BESR to each staff's skill set.
- The less repetitive use of hand movements, the less physical strain required.
- The improvement of mental skills, concentration/focus, clarity.
- The benefit of learning new technology.
- The enhancement of proofreading skills.
- The application of medical knowledge.

BESR also has the ability to increase productivity for some staff. It can improve turnaround times, increase work availability, and reduce overflow outsourcing (if applicable to your organization).

Engaging staff also means describing how BESR works so they can understand how the product will benefit them. Consider having the vendor set up a demonstration of the new technology early on, showing how the drafts come to them and how keystrokes and editing will differ from straight transcribing. Going from straight transcription to editing speech-recognized drafts requires a different mindset. Essentially, the transcriptionist is going from listening-interpreting-typing to reading-listening-interpreting-editing all at once.

Transcriptionists should be informed that there is a learning curve during this transition period. Each person will make this transition at a different pace. Some may find it an easy transition while others may find it very difficult. Assure the transcriptionists that there will be additional training, tips, and education that will take place over time—and be sure to follow through on this. Be sure to ask them to bring forth their concerns, frustrations, and fears during this transition. Let them know that they will have support from their management team.

Compensation is a vital topic to staff when making this transition, whether your facility pays by production, by the hour, by hourly with incentive, or another model. It is helpful to point out to the transcriptionists some of the different factors that go into developing the compensation program. It is strongly recommended that the compensation process be as transparent as possible. For complete discussion on developing a compensation model for BESR, see the Compensation section of this tool kit.

While seeing a demonstration may help explain some of BESR system's inner working, change can be intimidating. Reassure your staff that adequate training will be provided and that a learning curve is expected and will be accounted and compensated for.



## Develop an Outstanding Training Program

Training the HDS to progress from straight transcription to back-end speech editing will be a different process if your transcription operation is onsite at a healthcare facility rather than offsite/remote, as it is when using an MTSO. Since a vendor/MTSO will already have their own training program in place, this section focuses on a healthcare facility adopting BESR and its need to educate its onsite staff in the use of the new software.

Your BESR vendor likely has its own training program prepared and training materials already created for the HDS, and this training is generally included in their pricing. Be sure to find out if you will be given a soft copy of these materials as well as hard copies for each staff member, and ascertain if you are allowed to modify the vendor's training materials in any way for your own use (some vendors will allow this).

Back-end speech recognition is generally seamless and there should be no need to train healthcare provider authors at the beginning of your project, so training suggestions here are focused on the HDSs.

- **Train Key Staff First:** Begin by having leads, supervisors, managers, QA, and resource staff trained to use the BESR technology before including the HDSs. This will most likely occur during the testing process. This will help to identify any associated platform issues such as built-in expanders, other adjunct software, or cosmetic appearance issues, such as edit window size, font size, etc.
- **Ensure Access/Permissions are in Place:** Make sure that all staff who are training are able to access and use the software as much as possible on a daily basis. Practice makes progress. Be aware that this may impact your routine work flow and turnaround time. Overtime or outsourcing may be required.
- **Provide Training Materials:** Carefully go through all training material provided to ensure its accuracy. If necessary and where it can be helpful, add visuals, screen shots, enhanced instructions, links to online tutorials, etc.
- **Consider 3-Phase Training:** As more healthcare provider authors pass the required degree of proficiency and an increasing level of draft text is created, consider a 3-phase training program for the HDSs:
  1. Introduce and demonstrate the platform.
  2. Attend structured training and begin editing on the platform.
  3. Continually review proficiency and follow up on training with a resource such as a lead, supervisor, trainer, coach, QA specialist, or peer to peer.
- **Decide Training Logistics:** Give consideration to how many training classes each HDS may need. Carefully plan class size and allow for one-on-one training. Determine location—onsite classroom or online/remote. Review labor laws as they may require paid travel time, etc.
- **Focus on Familiarity:** Give thought to beginning training by allowing the HDS to focus on familiar work types, specialties, and/or dictators, initially. The contextual clues of a given specialty can be a helpful tool when learning to edit. It is not recommended that this division of the workload continue after training, however.

- **Provide Feedback:** It is important that an appropriate amount of each HDS's work be quality reviewed initially and for a period of time after to ensure adherence to the Style Guide and consistent quality. Determine how much this would be for your organization and for how long. Our recommendation is the more QA the better. This will not necessarily be "once and done," as new QA standards may reveal themselves with increased editing proficiency of staff over time.

Develop a process for staff feedback of their QA results. Be sure to inform them how they will receive their results, how often, whether the results are system generated or supervisor initiated, etc.

If the BESR software has a reporting capacity on HDS effectiveness of using navigation keys and/or "hot keys," let staff know they will be apprised of ways they can improve their productivity with these tools. Determine how this information will be passed on to staff and by whom.

- **Provide Updates:** Provide updated training, or a refresher course, when the BESR platform has upgrades. Be sure the vendor provides a full list of all new features and how to use them.

Provide updated training materials when they are changed, improved or upgraded.

- **Provide New Staff Training:** Be sure all new staff receive equivalent training to best ensure their opportunity for success.

## Develop an Appropriate Compensation Model

Before consideration can be given to designing a new compensation model for BESR, review of the [AHDI Compensation Tool Kit](#) is recommended, with emphasis on the section “Technology Impact and Why.”

### Line Counting Methodology

- Understand your current system’s line count methodology thoroughly. You should have solid production and pay data for your current system in order to make the transition smooth and transparent to the C-suite and to your staff.
- Determine if headers and footers are included.
- Determine if the new vendor is able to replicate your current methodology or if you need to change the line count configuration. If so, how will this translate and impact pay/line changes or an incentive plan? You must be able to inform your staff in a clear and concise manner the changes that will affect their pay. Again, it is extremely important to be as transparent as possible. *It is recognized that you may not be changing vendors but simply adding BESR to your current system. If so, you may not need to make any changes.*
- Determine if paying by the line, will you have one rate for BESR and one rate for traditional transcription? The rate for BESR should be flexible for the first six months and changed as SR production increases. It is not recommended to simply cut your traditional rate in half and assume staff production overall will increase 100%. Many factors will affect your results and care must be given to consider all factors when reviewing SR compensation. It is important to be flexible during this learning curve timeframe and communicate with your staff and C-suite the changes that are happening in a timely manner.

### Budget Considerations

- Determine if there will be any impact on your budget for salaries. It is best to remain budget neutral.
- Involve your organization’s Human Resources and Compensation departments immediately upon deciding to implement BESR. Keep HR and Compensation involved for six months to a year.
- Consider some job descriptions may change over time and discuss with HR and Compensation.
- Decide how staff will be paid during training. Consider holding compensation stable during for at least a 90-day period, which would include training and allow time for staff to learn tools and increase their respective line counts. Another option is to consider paying a base hourly rate during the training period. If HDSs are currently paid production, an hourly average rate could be established based on the past three-month average of production pay. If staff is paid hourly plus incentive, an average of hourly plus average incentive/hour could be paid. Set a deadline to move staff from training pay to your regular compensation model. It may be sooner than 90 days if the majority of staff are meeting production goals,

or you may want to allow extra time if the majority are still struggling. There is also the option to move staff to the regular pay model as each individual is consistently meeting production. This would require more detailed supervision but would be more cost-effective overall. Staff should be motivated to move to the regular pay model; therefore, it is recommended not to allow the training period to go too long. This timeframe will vary from organization to organization, and it is not “one size fits all.”

### **Production Review**

- Review productivity data and provide feedback at least biweekly to each HDS (weekly is preferable) during the recommended 90-day period. HDSs should be able to check their daily production for both BESR and traditional transcription to help them see their progress and set personal goals.
- Consider providing staff mock “paychecks” during the training period showing what they would be earning if paid production or hourly/incentive. This will help staff members with personal goal-setting.
- Set new thresholds as productivity increases if paying incentive. Goals can be set individually for traditional transcription and BESR: X lines/hour for each model. A blended threshold can be set but would be more difficult to monitor and reset.
- Set acceptable production thresholds for both BESR and traditional transcription for performance evaluations.

### **Ongoing Evaluation and Adjustment of Compensation Models**

- Review and reevaluate your compensation package on a regular basis. Be flexible. This is particularly important with back-end speech recognition editing as the technology will continue to learn to expand on the number of physicians' dictations that can be edited versus transcribing from scratch and improve the physicians' speech profiles, resulting in a higher level of recognition quality with reduced editing overall. Depending on your rollout approach this may take some time, but typically it can take 60-180 days for all eligible dictators to reach a level of recognition quality that allows for a productivity gain. High-volume dictators will reach this level at a much faster pace.
- Consider carefully the timing of any changes to your compensation model.
  - Consider cost per line and the impact of incentive
  - Consider the impact of hourly to production model
- Develop a compensation model for each system in which a staff member may be required to work. Attempting to translate each system to one common pay model introduces complication and lacks transparency.
- Consider the learning curve as a factor to becoming familiar with the system itself as well as having to adapt to the new skill of editing speech-recognized text.

- Consider all of the components of a compensation model as there are often varying levels of proficiency with speech recognition editing, depending on the individual's proficiency when transcribing from scratch. Those who are moderate producers when transcribing from scratch might experience a significant gain in productivity, whereas a high producer might not experience as much of a gain in productivity. The model should not penalize the high producer or else they might monetarily be better off transcribing from scratch.

## Vendor Relationships

You should form a partnership with your vendor and work to maintain that relationship. Set forth clear expectations and desires and request the same from them. Participate in studies that they ask you to be a part of and attend conferences that they may hold; this will all strengthen your relationship with them.

It is important to establish relationships with people that you will be working with from your vendor. Determine each of their roles and responsibilities with regard to your organization so that you can take issues that arise to the appropriate resource.

Determine the desired escalation process and timeline for your organization to be able to follow up on items.

Holding a vendor accountable when the technology is not meeting your desired goals can sometimes be challenging. The first place of reference to go when experiencing problems in this area is to your contract/agreement. If something goes awry that is clearly laid out in that contract, it is easier to point that out to your vendor.

The escalation process should be followed both internally and at the vendor level. Don't be afraid to escalate or take things up the chain of command as needed. If you are not getting satisfactory results, continue going up the chain until an understanding can be met from both sides. There may even be times that somebody higher up than yourself may need to be the one to reach out to the vendor top commands in order to resolve a situation.

It is also a good idea to establish relationships with other customers of the vendor. Participate in listserv topics. Vendor conferences also provide a good forum to talk to their other customers. Establishing these relationships will be beneficial for bouncing ideas off each other. It is possible others have dealt with an issue you may be experiencing and may have solutions to offer.

Create a clear format for staff to report technical issues. This will make it easier to track and report issues and the frequency in which they occur. This will also allow you to easily prioritize issues that come up.

## Determine Release of the Draft Text

When a medical author dictates into a speech recognition system, the natural language processor begins a process of machine learning in an effort to produce an accurate document. In BESR this document is referred to as the draft and is what the medical editor sees in the edit window immediately after downloading the file. The quality of this draft document can be measured based on the percentage of accurately recognized text by the BESR system. Made possible by an algorithm, BESR can learn prior to any human edits. The point at which draft text is released to an editor may be defined by a predetermined accuracy threshold (e.g., 90% accuracy). However, it is important to consider other factors to evaluate when draft text is activated for a medical author.

### Dictation Habits and Turning on the Draft Text

Multiple factors play into how well suited a person will be for BESR. Is the dictator a good candidate for BESR? A poor dictator can create additional editing effort. A medical author who constantly changes his or her mind will create excessive text that will require deletion and many edits. If a dictator carries on a conversation while dictating, this will also create unnecessary text requiring deletion. Poor dictation habits such as dictating in a noisy environment or eating may be factors in lower recognition rates.

Some work types may be more amenable than others for BESR.

Again, evaluate the draft recognition rate for each author. A predetermined threshold or range can be determined as the deciding factor on when to release draft text. We recommend flexibility when setting the threshold.

It is recommended to have a continuous scoring system in place for each dictator, which will help determine whether to activate or deactivate the BESR. Dictators who could benefit from dictation best practices education should be identified by staff. Quality assurance staff are well suited to correctly identify authors who need to be deactivated. Also, transcription managers can get a sense of who is not suitable for BESR based on complaints from healthcare documentation specialists.

Also have a process in place to continuously evaluate dictator proficiency. Recognition rates should not only be looked at during the initial activation of an author but rather on a continual basis. If the author's speech-recognized drafts are consistently lower than the set threshold, the decision can be made for deactivation. Again, dictators who could benefit from dictation best practice education should be identified by staff. Through dictation education, recognized rates should increase.

### Releasing Draft Text to HDSs

It is recommended that each organization establish its own criteria for release of the draft text in conjunction with the vendor. When determining release of BESR drafts to HDSs, it is important to think about the best way to do so. Consider not only the draft itself but how this may align with the goals of implementation and whether or not the quality is sufficient to achieve said goals. If you are implementing BESR to improve turnaround time, look at applying BESR to those work types you want to improve on.

Perhaps you have a group of dictators who speak particularly clear and state similar dictation each time. These providers would be better candidates for high recognition on drafts than those that change their mind often, do not speak clearly, or dictate in high traffic areas with lots of background noise. Look at HDSs' skill sets or productivity when considering who to release BESR drafts to; lower producers may see big gains by editing and those who are more keyboard driven or have greater levels of computer knowledge may transition to editing faster than others.

Regardless of the method of release chosen, understand that there will be a learning curve for all staff as they convert to the new skills sets needed to edit versus straight transcribing. Some of this includes learning new shortcut keystrokes related to editing; needing to be more computer savvy, as editing usually is more technologically based; improving proofreading skills; and even putting forth higher levels of concentration to focus on the text and what is being said, avoiding the power of suggestion to ensure medical and nonmedical homonyms and contextual context is accurate. Be aware that those extremely high producers may not gain as much of a jump in productivity as those at a lower level of producing.

The technology of the BESR program may also affect the release of the draft. Determine if your staff will have the ability to reject a draft if the quality is too poor (and straight type the report instead), or if this option is not available. Decide if there will be a threshold that dictators need to meet in terms of lines (and score thresholds) in order to be considered an acceptable candidate for using BESR.

It is important to monitor both individual and overall progress continually to evaluate the value-add of BESR. This will help determine the course of action needed, if any, to assist HDSs in developing the necessary skills for editing and determining if BESR is meeting your organizational goals. Look at the reporting statistics of active dictators to ensure their drafts still meet adequate standards for release. Also look at the statistics of dictators who are on the cusp of eligibility to determine further good dictation practices that may make them eligible for BESR.



## Develop a Style Guide/Guidelines for SR Editing

Developing a style guide for speech recognition documents is a very complex process with many things to keep in mind. The process should begin with the guidelines provided to your facility by the vendor. Often times there are basic rules that need to be followed in order for the speech recognition software to work and “learn” efficiently. One example is not rewording text unnecessarily simply for proper sentence structure. Another example could be certain symbols that do not translate well and should be spelled out. Once that is received, assemble a team of key staff members to discuss and further expand the style guide to include relevant [Book of Style](#) standards and styles as well as any client- or facility-specific preferences and other necessary guidelines in order for the speech engine to work effectively. If multiple facilities are being combined, be sure to include a representative from each facility to collaborate on creating the style guide and to come to a consensus of the various items that need to be explained, included, and followed. The main style guidelines should be clear and used universally by all healthcare documentation staff. Supplemental guidelines for client- or dictator-specific preferences can be added and should include samples.

Once the style guide has been completed, it is important to go over the entire document with your transcriptionists. Be sure to specifically point out or outline any changes made from the previous style guide. The style guide must be followed strictly. Variations in following the style guide will result in reduced functionality of speech recognition software and poor drafts. It is important to periodically reevaluate your style guide. As your facility becomes more familiar with the speech recognition software, adjustments may be needed to the style guide as you may find that the documents are unnecessarily being over-edited.

### **Examples of tips to avoid over-editing**

- Do not turn clipped phrases into complete sentences; be comfortable with phrases.
- Do not add or delete articles unnecessarily.
- Do not remove conjunctions from the beginning of sentences.
- Do not change sentences that begin with a number.
- Do not add or delete commas unnecessarily.

# Evaluating Progress

## Introduction

When implementing speech recognition, it is to your organization's benefit to perform meticulous accounting and reporting on a regular basis at all phases. This will help you identify issues and find solutions more quickly, help you stay within budget, and keep the lines of communication open and transparent.

It is important that the manager/supervisor has steps in place to evaluate the progress within the department and to report to administration. This includes evaluating providers, your staff, and the system itself.

## Data Reporting

There are many options for reporting to administration. Establish what information is pertinent and how often reporting should be done. Determine the manner in which the data will be exhibited (e.g., visually using graphs or analytically with numbers). Regardless of the reporting structure used, it is imperative to ensure all data are clearly understandable for all who may view it. Good data should be simple, portray the story you are trying to tell, and, if possible, be actionable.

### Reporting Best Practices

- Ensure your report answers the main question for gathering the data in the first place—the how, why, and what.
- Include the purpose and make sure you can follow the logic of it.
- Use your reports to convey the goal of the project in perspective to what the achievement was.
- Keep graphs or charts clutter-free by emphasizing only what information is important/relevant.
- Limit use of colors and use a less-is-more approach with formatting.
- Report out on a consistent basis to ensure positive gains from speech implementation.

### Data Reporting

Compare the total amount of work done by straight transcribing to the amount edited through speech recognition, both on individuals and by the department as a whole.

Collect data on turnaround times, pre- and post-production rates, and ROI. Consider also showing your baseline state compared to your goal compared to your current state. These can give an overall view of the impact of speech recognition implementation to

your organization. They can show individual progress and overall progress. It is also important to evaluate productivity to dollars spent and outsourcing costs if applicable.

Good data can be a great tool for total quality improvement, to show productivity and department improvements, and also improvement to the bottom line. It is recommended to monitor the following:

### ***Overall Evaluation***

1. Turnaround time
2. Return on investment of cost per line, FTEs
3. Outsource dollars saved
4. Percent of providers using SR
5. Percent of lines transcribed using SR
6. Percent of lines outsourced

### ***Provider Evaluation***

1. Error rate
2. Recognition rate
3. Work type
4. Dictation habits

### ***Staff Evaluation***

1. Productivity, increase in lines
2. Quality (audit accuracy)
3. Return on investment of cost per line, FTEs
4. Turnaround time
5. Editing effort/over-editing (if available)
6. Keystroke proficiency including use of navigation and shortcut keys

### ***HDS Self-evaluation***

1. Monitor daily progress
2. Establish baselines for BESR and traditional and compare them to current productivity
3. Set daily or weekly goals
  - a. Set percentage of improvement in lines per hour or using a productivity ratio based on how many minutes it takes to transcribe or edit every one minute of dictation
  - b. Acquire new shortcut keystrokes

### **Monitor Progress**

Again, it is important to monitor the HDSs and the technology provided by the vendor at the onset of implementation. Equally important is continuing that monitoring post-implementation. Because it is a new skill that transcriptionists learn when transitioning, you will find that each transcriptionist will make that transition differently. While some

may learn quickly and their productivity may take off, you will find other that have great difficulty making the adjustment.

If you should find HDSs that are having difficulty making the adjustment, some additional training/coaching may be needed. Make sure, first and foremost, that the HDS has all the information they need. Sometimes when a great deal of information is thrown at the HDS during implementation, they may lose track of some things along the way.

Before approaching the HDS regarding their lower proficiency/accuracy, be sure to thoroughly review their proficiency in order to offer them the best outcomes. Evaluate the keystrokes they are using for editing and mentor them appropriately. Each program will have different shortcuts/keystrokes available to ease the editing process for the HDSs.

Often times when making the transition from fully transcribing to editing documents, HDSs tend to over-edit. Your organization should set forth some guidelines for over-editing. Over-editing or making multiple minor errors to content and format that does not alter the integrity of the document can be one explanation as to why a transcriptionist may not be as proficient as others.

There are many options when getting ready to provide training/coaching to your transcriptionists. Consider which option would best benefit each individual person.

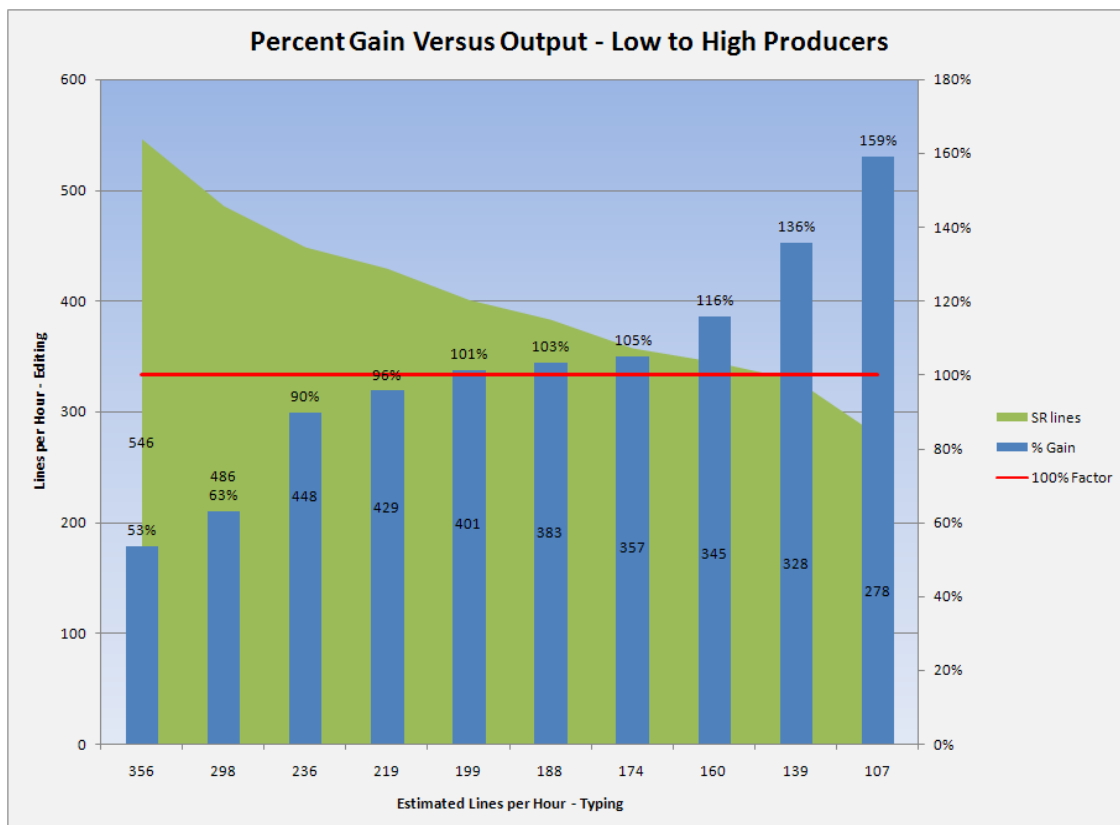
- **One-on-one peer training** – Having a high performer meet with a low performer in a one-on-one setting to share ideas, tips and tricks that have led to their high performance.
- **Virtual peer training** – Having a high performer meet with a low performer virtually to share ideas, trips and tricks that has led to their high performance.
- **Electronic platform for tips and tricks** – Creating an electronic platform such as SharePoint to post common tips and tricks for universal use. If no electronic platform is available, set up an email chain. Encourage staff to share tips and tricks.
- **Manager/supervisor-employee training** – Develop and distribute tips and tricks for managers to use when providing feedback/coaching for individuals.
- **One-on-one QA training** – Having a QA staff member meet with a low performer in a one-on-one setting to visualize their processes and look for ways to streamline, share ideas, tips and tricks.
- **Virtual QA training** – Having a QA staff member meet with a low performer virtually to visualize their processes and look for ways to streamline, share ideas, tips and tricks.

Your facility's management and QA staff should create a program to follow for when and how feedback will be provided to an HDS. Creating a template of what information should be provided to the HDS is helpful so that they receive feedback in the same format no matter who is sending it. Most programs have reports that can be run to determine the use of shortcuts and keystrokes. Determine the frequency of when these reports should be run and provided to HDSs. This will help them track their own progress. This information may also be helpful from the HR perspective.

Your facility should also create a template or a process of how they want things reported regarding training that needs to be provided to physicians. There should be a clear process for them to follow along with how and to whom to report any issues. If the process about what should be reported is not clear enough you can run into information overload. Make sure to provide what type of information and when you want the information reported (e.g., every time they run into a problem with an issue or only if they are noticing patterns with physicians). These issues can range from a physician dictating in a loud area to him entering incorrect information every time he dictates, and so on.

Depending on the software being used, there is a high likelihood that some physicians will not produce quality drafts because of factors such as disorganized speech, stuttering, mumbling, distraction, etc. Policies should be developed to determine the steps/qualifiers that an author needs to meet in order for the BESR software to be turned on for them. Additional training should be offered to physicians in order to improve their drafts.

Continue to monitor the progress of your staff's productivity over time. Within the following chart, you can see that the high producers, when transcribing from scratch, experience much less of a percentage productivity gain with editing than the low producers. Some high producers may not experience a gain in productivity from editing.



Providers who do not dictate a large number of minutes may not be the best candidates for BESR because of a longer learning curve for the system. Because of the

low volume being dictated, the system does not have the opportunity to learn and produce quality draft documents. It may take more time and effort for the HDS to edit them than to transcribe them traditionally.

Monitor productivity metrics on an individual basis to watch for productivity plateaus. Followup training sessions are helpful to ensure staff members are adapting to the new editing skill. This includes use of navigation keys and shortcut keys to help coordinate the highlighting of text during audio playback with edits needed.

Separate the productivity statistics for edited documents from those transcribed from scratch to show the productivity gain. But also, having a blended productivity measure with an indication of the percentage of documents edited during that timeframe can help to reveal higher levels of efficiency once most of the work is being edited.

## Conclusion

Implementing a back-end speech recognition program won't be easy, but there is no reason to reinvent the wheel. Draw from others experience and expertise by having the right team members in place, each with clearly defined responsibilities, expectations, and deadlines to make the process smoother. Take time to do thorough research and to consult experts and existing users of the BESR you are implementing to help ensure well-rounded information, making decisions easier and likely saving the organization some time and money. Develop clear policies and procedures, standards, and processes so that expectations are clear and consistent, but don't forget to reevaluate these periodically and update them as needed.

It is our hope that this toolkit is a useful guide to you and your organization throughout each stage of your BESR implementation. Please send any feedback or suggestions to [ahdi@ahdionline.org](mailto:ahdi@ahdionline.org).