Can You Hear Me Now?

BY KIMBERLY SMITH, MPHA
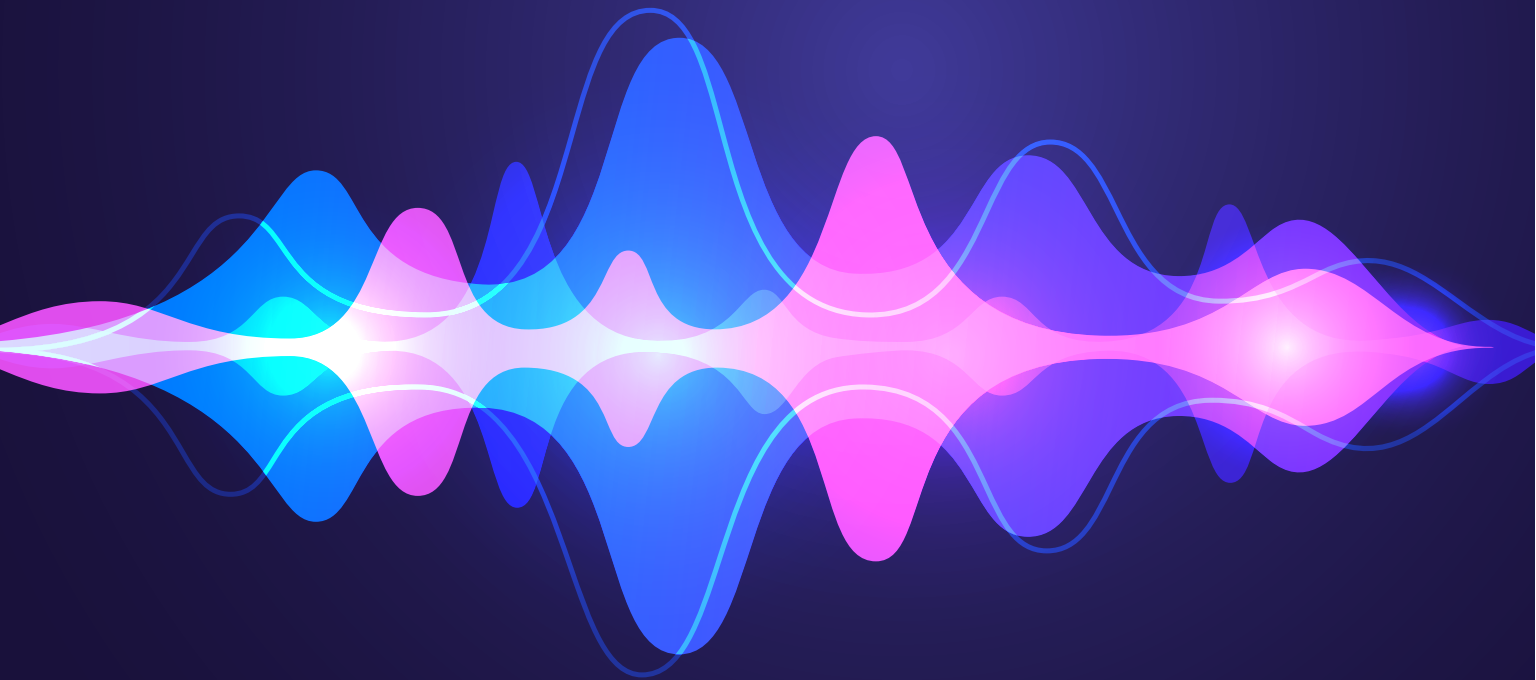
Improving physician wellness with voice recognition software

Like many—if not most—physicians, those at Mount Sinai Health System point to patient documentation as a significant stressor in the workplace. When Mount Sinai asked its physicians in 2017 to rank their top dissatisfiers at work, excessive time spent documenting patient interactions came out on top. In response, in 2018 Mount Sinai's Department of Radiation Oncology committed to addressing the extent to which patient documentation was overburdening our physicians. We recognized that this issue had become a factor in maintaining physician wellness, so we aimed to make our required documentation simpler, faster, and more streamlined. The department assembled and tasked a multidisciplinary team to determine how to best accomplish this by enhancing the systems that we were already using.

An Expanding Department

Mount Sinai is an integrated healthcare system that encompasses the Icahn School of Medicine and eight hospital campuses in the New York metropolitan area. Mount Sinai's Radiation Oncology Department has 5 locations across Manhattan, consisting of 10 linear accelerators, 17 full-time faculty, and 160 staff members.

In March 2012 the radiation oncology department implemented a department-specific electronic medical record (EMR) that includes an automated workflow process for all roles, detailed assessments with quality measure fields, and quality checklists to help drive compliance and continuity of care. This EMR was a

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departure from the widely used Epic EMR at our hospital.

We believe that this separate system aids in continuity of care and patient safety. It was important that our clinicians operate in only one system, because documenting care in multiple systems can lead to frustration or mistakes due to inadvertent inconsistencies in treatment records or dosages. Our Mosaiq EMR has streamlined our entire operational workflow and documentation process, and we continue to optimize it for our ongoing needs.

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Focus on Wellness

In 2017 the committee's leadership was increasingly hearing from subcommittees and faculty groups about growing frustrations among radiation oncology physicians and residents concerning the amount of time they spent typing and documenting patient notes. Such work was burdensome, they said, running well after clinic hours and affecting their work-life balance. But with regulatory demands for documentation growing more stringent with programs like the Merit-based Incentive Payment System (MIPS) and Medicare Access and CHIP Reauthorization Act (MACRA), the threat of audits, and internal requirements for speedy documentation, there was no immediately apparent solution.

Responses to physician complaints about the burden of documentation have not traditionally gone far. If documentation is mandated, there is not much wiggle room. But our providers told us that they were near burnout, sacrificing face time with patients in favor of time spent behind computer screens. Increasing emphasis on physician wellness made us realize that it is our responsibility to resolve and/or alleviate some of the burdens that were making our physicians unhappy in the workplace.

An article in the *New England Journal of Medicine Catalyst* in August 2017 describes physician well-being as at the heart of patient care and quality healthcare delivery:

"The quality and safety of patient care, and indeed the very vitality of our healthcare systems, depend heavily on high-functioning physicians. Yet recent data have revealed an extraordinarily high—and increasing—prevalence of physician burnout, defined as emotional exhaustion, interpersonal disengagement, and a low sense of personal accomplishment. In light of compelling evidence that burnout negatively affects patient care, healthcare leaders are rightly alarmed and are searching for answers."[1]

To help ease the mounting burnout our physicians spoke of, in 2017 Mount Sinai's chief wellness officer met with department chairs and surveyed the 7,400 physicians across our healthcare system to determine the biggest contributors to their job stress. Our physicians overwhelmingly cited patient documentation and the time they spent on associated tasks as their top dissatisfiers.

In response, the radiation oncology department committed to implementing easier documentation processes with a robust digital

In 2014 our department grew from one location to five when Mount Sinai merged with the former Continuum Health System. To integrate with the new locations, we brought them all under the Mosaiq EMR system by September 2015. To ensure that we remained consistent in our daily processes, we created the Executive EMR Committee in 2017. This gave us a platform through which workers at all five radiation oncology sites could come together and discuss operational efficiencies, request workflow changes, and obtain approval for system-wide adjustments.

Led by the chair of the radiation oncology department, the Executive EMR Committee encompasses representatives from all sites, including site physician directors. Subcommittees representing each discipline meet on a monthly basis and include at least one member from each site. The subcommittees report at executive committee meetings on a quarterly basis. There, all committee members listen to proposals and determine whether requests are feasible. The Executive EMR Committee has been a powerful tool in bridging cultural gaps across our departments and ensuring that everyone understands that they are part of a larger team.

content management system with built-in templates. But our physicians still continued to struggle to balance required documentation with their busy clinic schedules.

This feedback told us in no uncertain terms that that the workflow efficiencies we had created in our EMR were not sufficient. We needed a better solution to achieve the efficiencies that could help our physicians obtain better work-life balance. In response we integrated our EMR software with software that had speech recognition capabilities. We chose to implement software from Palabra and began to train our physicians to use the new system.

The Power of Voice Recognition

At the time, our EMR already incorporated a little-used dictation system that was a combination of eScribe and Dragon speech recognition software. eScribe is a digital content management system that is built into the Mosaiq software that we use for our EMR. Although the eScribe system is editable and can auto-populate a note, it still requires a great deal of typing, and physicians who used it had to erase orders and start over if one element of a note was missing or needed to be changed. This was time-consuming and could result in unnecessary frustration and non-compliance. We also found that that the Dragon software we had provided our physicians went largely unused due to its own inefficiencies.
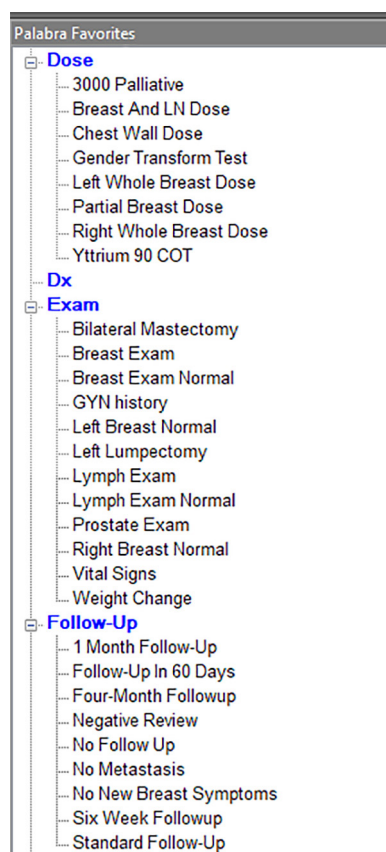
Our new Palabra software works with eScribe and Dragon to significantly enhance their effectiveness. Palabra automates the document creation process so that—solely through voice commands—physicians are able to:

- *Create notes.* Physicians can pull up the note they want to create for a specific patient via voice commands. The note will pre-populate with the patient's demographic and clinical information from the completed assessment in the EMR note associated with the visit.

  The Palabra replica feature allows physicians to create a flow of patient data that carries through all patient encounters and related documentation. The software can replicate targeted information in such a way that before the physician dictates the first word of a new note, the document already contains all of the relevant data generated from previous encounters and excludes any irrelevant or repetitious information.

- *Navigate throughout a note.* Using only voice commands, physicians can quickly navigate through a note and complete any missing items or add additional information without having to touch a mouse or keyboard.

- *Enter and delete data within a note.* Using their voices, physicians can add information to a note, change information that needs to be updated, and/or remove irrelevant information.

- *Create flexible favorites.* Physicians often have the same types of discussions with different patients. With this software, they can mark these discussions as "favorites." For example, a discussion may be labeled "side effect breast." This favorite will automatically generate a discussion for side effects of the

Our initial goal in implementing the Palabra system was to give our physicians a powerful tool that would enable them to complete their notes in a timelier and less frustrating manner. But during the training sessions, it became clear to our billing team and director that they, too, would significantly benefit from the use of this software.

Figure 1. Customized Data Entry Reduces Time Spent Documenting

Palabra's "flexible favorite" function can pre-populate patient information for recurring patient discussions.

breast so that physicians do not have to either speak or type the discussion each time they create a note. Favorites can pre-populate a patient's name, age, and gender, and it can insert chart data. This means that even "canned" text can be personalized for each patient (see Figure 1, page 31).

- *Snip images and text.* Physicians can use their voices to clip and insert images from anywhere on the screen and convert scanned documents into editable text. This feature can save a great deal of dictation time, because relevant information from imaging, laboratory, and pathology reports can be inserted into a note with just a few spoken words. Physicians can also easily add diagnostic images and relevant photos.
- **Complete tasks within the EMR.** After a physician completes a patient note, Palabra can automatically complete tasks in Mosaiq. Physicians no longer have to remember to do this; the workflow continues seamlessly without their intervention (see Figure 2, right).

Case Study: Reverse Entry Function

Palabra's capabilities—such as the reverse entry function—have allowed us to proactively ensure that patient notes are complete when they reach our billers and coders.

With Palabra, quality metrics and structured data from dictated notes flow back into the data fields within the Mosaiq system. The ability to create custom builds helps us take full advantage of this function. For example, one of our department's custom builds highlights missing diagnosis and staging information within orders. Because these data are first entered by a resident at Mount Sinai, the complexity of determining diagnosis and stage meant that these fields were often left blank. This could prolong operational workflow because billers or coders would have to track down the attending physician for answers to these questions. This, in turn, could delay the start time for patient treatments, because authorization cannot be obtained without this information.

To address this issue, we used Palabra's reverse entry function. We started with a custom build that triggers a pop-up box if diagnosis or staging information is missing when an attending physician opens a consult note to complete it. Once the physician enters diagnosis and staging values and completes and signs a note, these two values automatically reverse enter back into the assessment fields within the EMR. We also built in logic that completes the task in our EMR so that physicians do not have to go back and forth between systems to complete notes and tasks.

This application of reverse entry via voice command helps us maintain compliance with our patient rounds and record quality reporting measures for MIPS and MACRA. These data can also be harvested for research or analytic purposes and provide us critical information for insurance carriers (see Figure 3, right).

Outcomes

Our physicians cite three significant benefits from the Palabra system:

- *Time savings.* In interviews, our physicians tell us that they are now able to leave work on time and no longer have to re-enter the work environment from their homes to complete documentation tasks.
- *Continuity of care.* The flow of patient information and the ability to pull from multiple systems—all through voice commands—helps produce comprehensive documents. Patient notes become an integral part of the patient care workflow; once a note is approved, the software can automatically create orders, complete tasks, capture charges, and reverse enter assessment data.
- *Ease of use.* Our clinicians learned to use the system quickly and expressed surprise at what they were able to accomplish with simple voice commands. The training took one hour, and within two hours physicians were using the system in exam rooms. Feedback was overwhelmingly positive, with physicians remarking on the system's ease of use.

Our initial goal in implementing the Palabra system was to give our physicians a powerful tool that would enable them to complete their notes in a timelier and less frustrating manner. But during the training sessions, it became clear to our billing team and director that they, too, would significantly benefit from the use of this software. The benefits to our non-clinical staff include:

- *Time savings.* The software's capabilities resulted in a 14 percent increase in the number of notes completed within the required time frames within the first three months of using Palabra. The software's ability to reduce the number of clicks and cut down on redundant work has increased the efficiency of our billing department (see Table 1, page 34).
- *Fewer missing documents.* Physicians can sometimes forget to complete outlier documents, such as clinical treatment plans and special treatment procedure notes. Because specialty notes are not required for all patients, completing these notes is not always intuitive for physicians. Our billing manager worked closely with the Palabra team to ensure that outlier documents would automatically generate for physicians based on specific billing and coding elements. This capability increased our compliance rate and reduced the amount of time billing staff spends asking physicians to complete missing notes (see Figure 4, page 34). Palabra can also automatically generate charges for procedures, making it unnecessary for physicians to complete this step.
- *Enhanced compliance.* Now that they can make changes to patient notes with simple voice commands, our physicians no longer have to cancel and restart orders to make corrections. Aside from being a time-saver, this feature makes billing compliance much easier because orders must match billing codes and treatment plans. To meet our specific needs, our billing manager created pop-up screens in areas in which information was often missing. As a result, the frequency with which our billing staff contacts physicians to correct orders has significantly decreased (see Figure 5, page 35). Our billing manager estimates that the voice-enabled system is saving 30 to 40 minutes per biller per day.

Figure 2. No More Repetitive Data Entry

After a physician completes a patient note, Palabra can automatically complete tasks within the EMR.
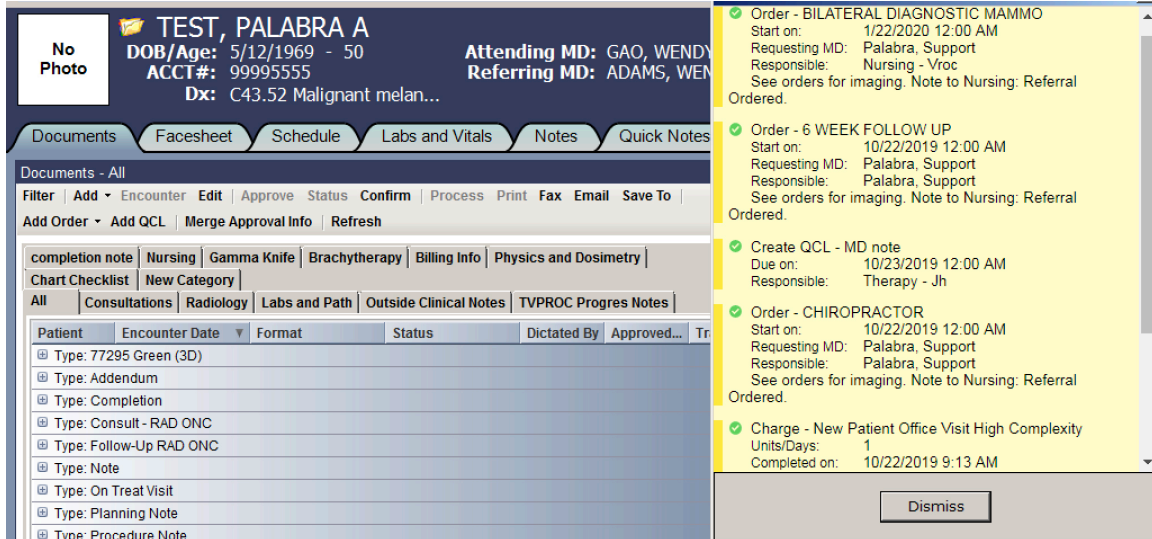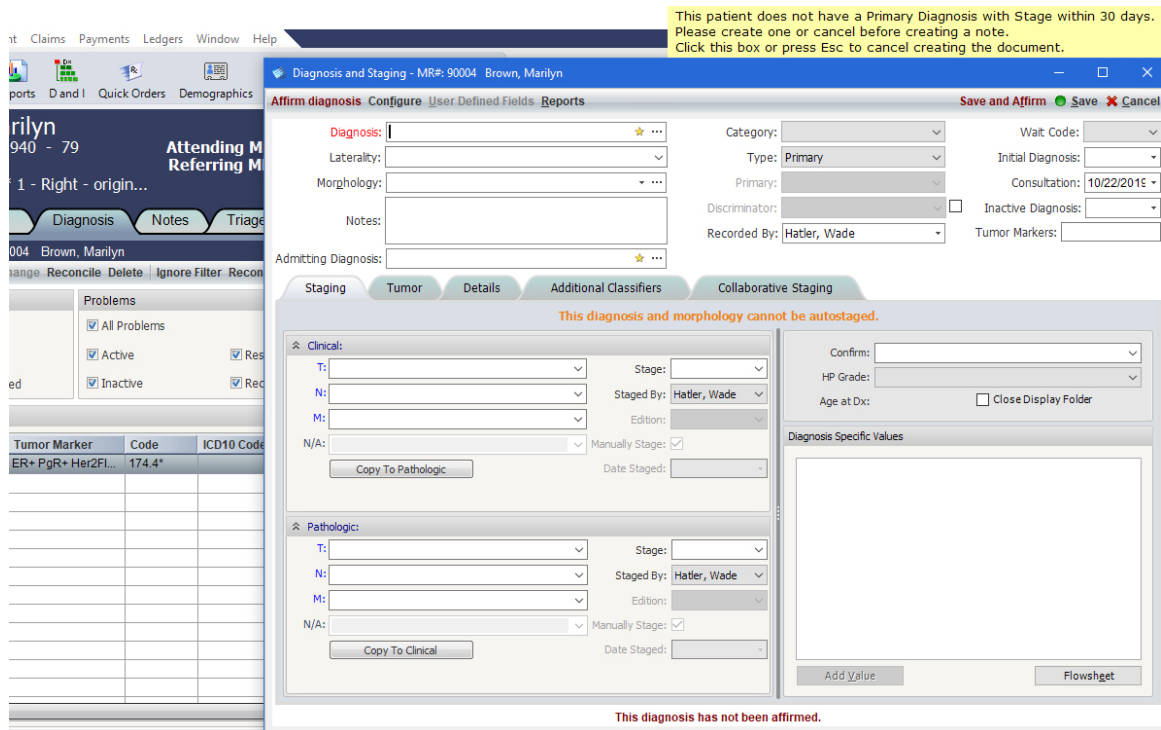

Figure 3. Reverse Entry via Voice Command Helps Maintain Compliance

Palabra's reverse entry function helps maintain compliance with patient rounds and record quality reporting measures for MIPS and MACRA.

Table 1. Technology Adoption by Individual Physicians	
MD	**% 0-3 Days Increase in Completion**
A	4.78%
B	20.70%
C	1.59%
D	24.97%
E	19.86%
F	3.52%
G	18.08%
H	16.31%
I	21.88%
J	57.88%
K	3.90%
L	8.41%
M	9.74%
N	2.94%
Total	14.03%

Within the first three months after training on the voice-enabled system, individual physician use of the new system grew significantly.

Utilization reports for our Palabra software indicate that our physicians find it very valuable to their documentation efforts. Prior to the implementation of Palabra, the Dragon system available to providers remained unused. But within five days of implementing Palabra in May 2018, physicians completed 450 patient notes with the software; by January 2019, our physicians had completed more than 21,000 notes with Palabra.

Our enhanced EMR system has led to improved physician and staff satisfaction, as evidenced by higher utilization rates, timelier document completion, and better compliance with required data fields for assessment items such as those required by MACRA and MIPS. The result is a smooth and efficient process that reduces physician workload, improves patient care, and makes our workflow more efficient. Physicians and staff say that this has resulted in their improved well-being, and they are now able to spend more time doing what they want to do—caring for patients. ◧

Kimberly Smith, MPHA, is the administrative vice chair in the Department of Radiation Oncology at Mount Sinai Health System, New York, NY.

Reference

1. Bohman B, Dyrbye L, Sinsky C, et al. Physician well-being: the reciprocity of practice efficiency, culture of wellness, and personal resilience. *NEJM Catalyst.* 2017. Available online at: catalyst.nejm.org/physician-well-being-efficiency-wellness-resilience/. Last accessed October 14, 2019.

Figure 4. Automatic Generation Cuts Back on Missing Documents

Palabra can automatically generate customized documents that physicians may otherwise overlook based on specific billing and coding elements.
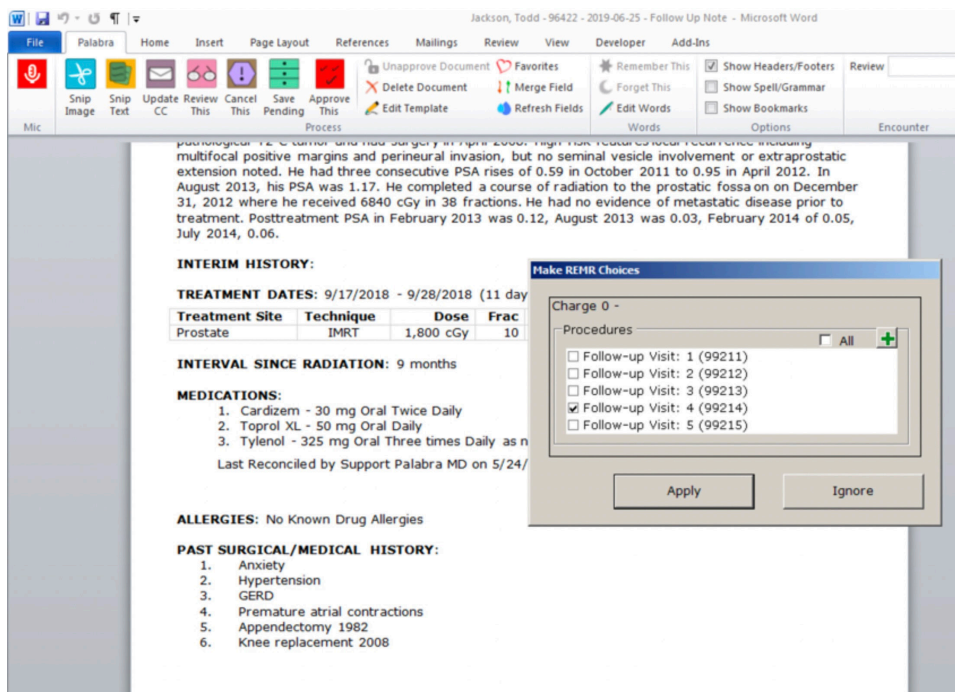
Figure 5. Pop-Up Screens Drive Billing Compliance

Our billing manager created pop-up reminder screens for our physicians in sections in which patient information was often missing. As a result, our billing staff now corrects orders far less frequently.
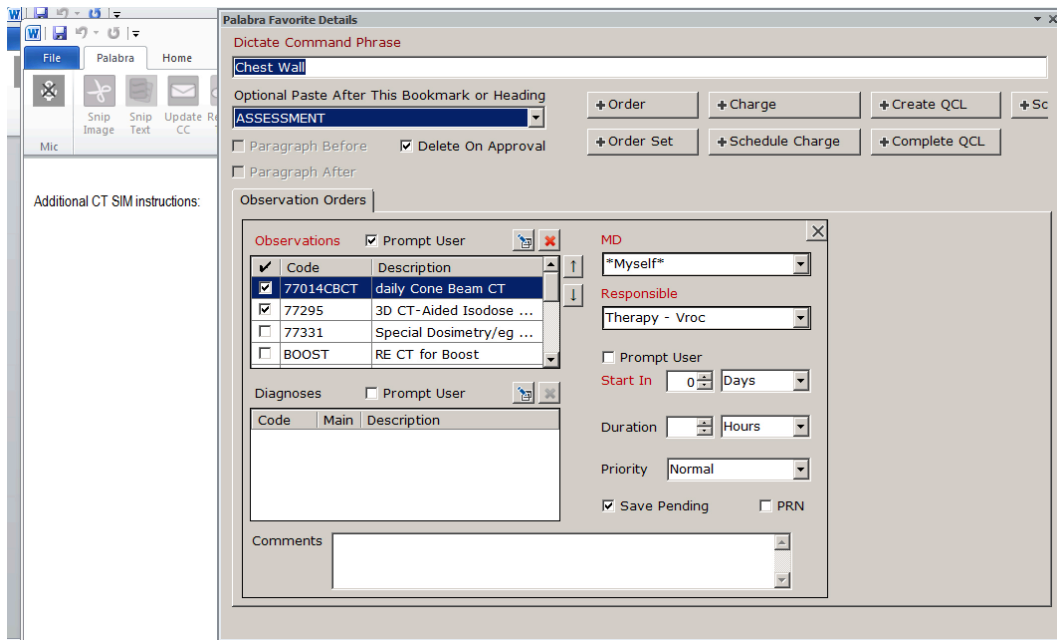

Figure 6. Utilization of Technology

DOCUMENTS COMPLETED WITH PALABRA
As of January 24, 2019

21,618

13,921
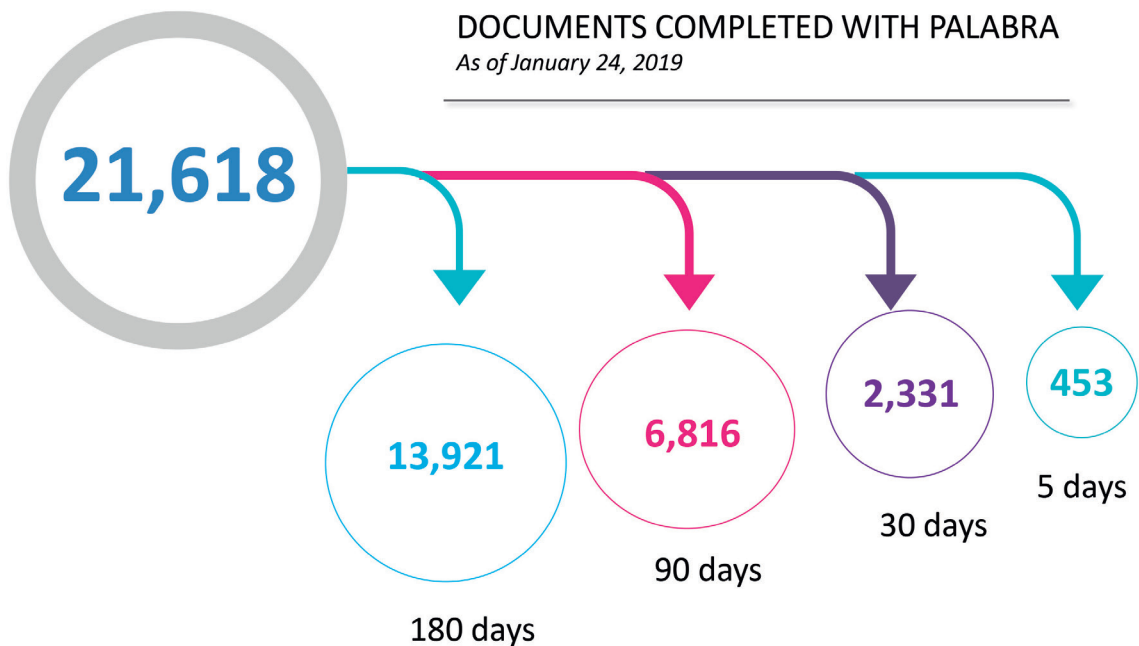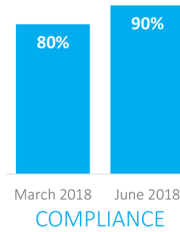180 days

6,816
90 days

2,331
30 days

453
5 days

Figure 7. Clinicians Share Feedback on Technology Features

What Do Clinicians Love the Most?

"I like that it prepopulates notes. This really helps with completing notes efficiently."

"I like the responsiveness of the team to requests and the ease of use. Overall this is a very well thought out interface."

80% 90%

March 2018   June 2018

COMPLIANCE

✓ Time Savings

Streamlined OTV notes are an enormous time saver! Short cuts to create notes!

✓ Continuity of Care

Data pulled in from prior note is important for the continuity of care.

✓ Ease of use

Training was excellent and within 2 hours the user is already improving their efficiency.

Figure 8. Staff Share Feedback on Technology Features

What Do Staff Love the Most?

"The completion of a note, charge capture and QCL are all completed with one action."

"The capability of the MD to undo an approval without having to void and start over."

✓ Timeliness of notes

Note approval within required timeframes has increased by 10%!

✓ No Missing Documents

CTP/STP/OTV automated generation

✓ Driving Compliance

Requests for custom prompts allow us to utilize the system to drive compliance.