

## Case study

# Reducing EHR time through clinical documentation tools: A speech-driven efficiency study

Sutter Health West Bay Medical Group Clinic,  
San Francisco



## The study



1 clinic location



7 clinician participants



2 surveys  
(baseline and conclusion)



2 training sessions

## Organizational profile

Documentation burden was a pain point for clinicians at Sutter Health. An internal team led by Dr. Matthew Sakumoto, chief medical information officer (CMIO) Sutter West Bay Region, decided to perform a study to understand how the organization's enterprise-wide speech solution **3M™ M\*Modal Fluency Direct** could help address documentation burden.

## Sample survey questions:

- How much time do you spend each day in the electronic health record (EHR)?
- What part of the EHR workflow requires your greatest time and effort?
- Rate the ease of your documentation experience with and without 3M Fluency Direct.

## Result highlights:

**47 minutes**

of average daily time savings achieved by one physician

**80%**

of participants indicated it was easy or very easy to use 3M Fluency Direct to document in the EHR



Study participants lowered their aggregate time spent in the EHR, moving from the 75th percentile to less time than the average Epic® user at Sutter Health for that specialty

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## Tackling documentation burden

According to Dr. Sakumoto, the project team’s purpose in conducting the efficiency study was clear: “There’s a big push for clinician wellness. The impetus for the study was clinician wellness and decreasing documentation burden.”

Sutter Health’s 3M Fluency Direct contract included training and onsite engagement with 3M’s solution advisor team, whose charge is to augment utilization of 3M solutions and, in this case, help with such an initiative. Dr. Sakumoto saw this as an opportunity to increase knowledge and usage of the tool – not only for real time dictation, but also for streamlining tasks like order entry and EHR navigation. “Voice commands and macros were high on my list,” he said. “Could we use them to get time spent on orders down?”

## Ready, set, study!

The project team selected a small primary care office in San Francisco for the study. “It was a ready, willing and diverse group,” Dr. Sakumoto said. “They fall on the early adopter curve of technology.” The participants also represented different roles, including physicians, physician assistants and nurse practitioners, with varying levels of experience with 3M Fluency Direct. To set a baseline for the study, they completed a survey about their experience documenting in the Epic EHR with and without 3M Fluency Direct. Then, it was off to training.

Sutter Health’s dedicated 3M solution advisor held two hands-on training sessions. The first focused on the speech recognition component of 3M Fluency Direct. The second covered the solution’s productivity tools, such as using speech-enabled smart phrases and navigation commands to help standardize and automate routine tasks within the EHR.

The study took place over the next quarter. “In other technology adoption studies I’ve done and intervention studies I’ve seen, there’s a honeymoon effect that first month,” Dr. Sakumoto said. “But if you can maintain it for three months, the chance of sustaining it beyond is high. We ended the study there and started asking, “What can we learn from this? What’s scalable and repeatable?”

## Evaluating the results

The project team reviewed results through quantitative and qualitative lenses. Objectively, they looked at time spent in the Epic EHR. For some study participants, the change was significant. The clinician who experienced the greatest difference went from spending an average of 120 minutes a day completing notes in Epic *before* the trainings to 73 minutes a day *after* the trainings – which translates into 47 fewer minutes documenting in the EHR each day on average.

## Study timeline



**March 16**

Survey conducted to gather baseline data, first training session covered basics of 3M Fluency Direct and study began



**April 25**

Second training session covered productivity tools



**June 19**

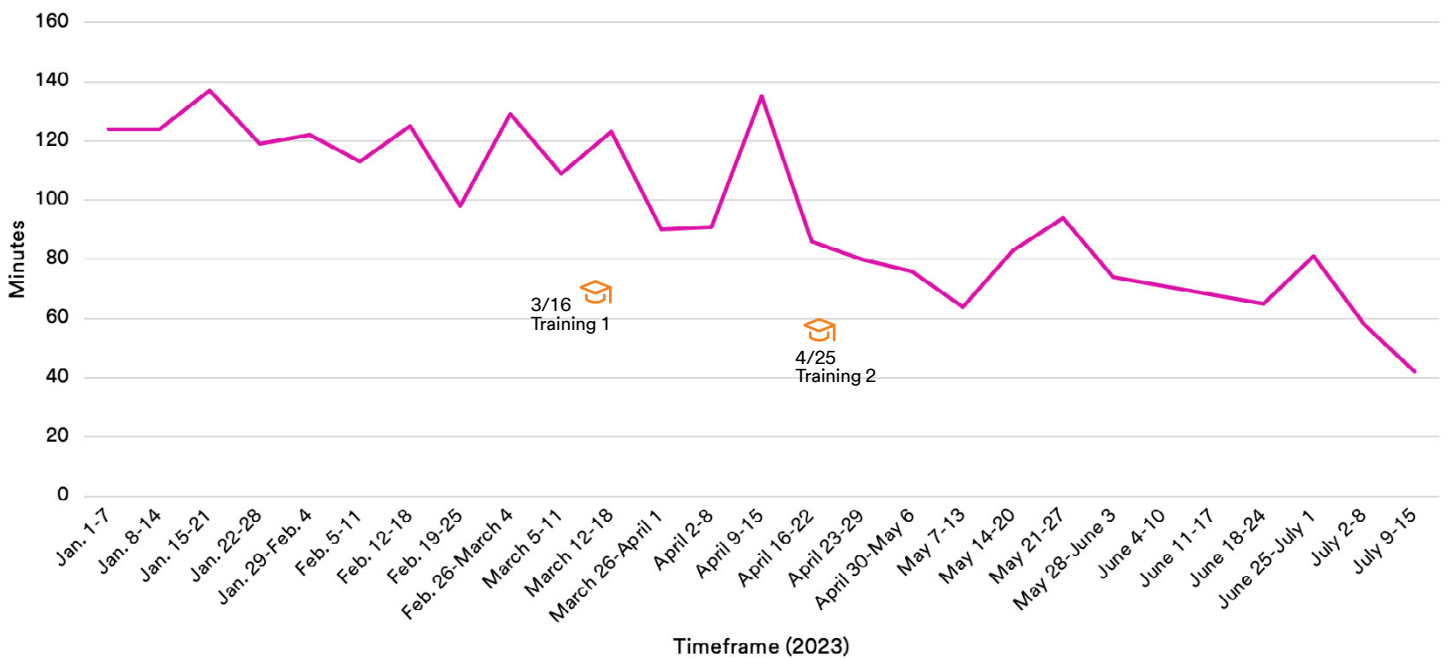
Status check with 3M and Dr. Sakumoto



**July 26**

Study ended, second survey conducted and feedback gathered

## Average time spent in EHR notes per day for one study participant



### Result highlights:

**120** minutes per day:

Average time to complete daily notes before training

**73** minutes per day:

Average time to complete daily notes after training

**47** minutes per day:

Average time savings since training

This physician benefitted from some additional one-on-one time with the 3M solution advisor. The individualized instruction around speech commands enabled the physician to create their own commands, including some that stacked to perform multiple steps – reducing clicks and helping boost productivity. “With this standardization of workflow, you don’t have to remember the sequence of five or six different clicks,” Dr. Sakumoto said. “You just have to remember the magic words to accomplish a specific task.”

“My goal is to save time and get back sanity,” Dr. Sakumoto said. “Everybody is so busy; even getting back five minutes is huge. The biggest thing is finding room to breathe – time to think gives you more time to care.” This was certainly the case for another participant who previously spent time updating the patient record during lunch, on breaks and after work – and now has gained back some personal time.

For clinicians who already had high usage of 3M Fluency Direct, the training did not have as much of an impact. “One physician was only spending 20 minutes in Epic notes per day,” Dr. Sakumoto said. “If you already have a pretty small baseline, it’s hard to make improvements on that. If you’re spending above the average amount of time, dramatic effects are possible.”

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—Dr. Matthew Sakumoto,  
CMIO Sutter West Bay  
Region

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As impactful as time savings can be, there's more to the story. "Even if total time didn't change, but the clinician's perception of their time spent was better – to me that's a win," Dr. Sakumoto said. "I actually care more about the subjective change because that's the clinician wellness piece. If they're happy, I'm happy." To help evaluate the participants' documentation experience, the project team conducted a closing survey.

## Key takeaways and lessons learned

With quantitative Epic data and qualitative survey feedback in hand, the project team uncovered some key takeaways.

**Using 3M Fluency Direct improved the study participants' documentation experience.** In the final survey, 80 percent of respondents said it was easy or very easy to document in the Epic EHR with 3M Fluency Direct, and 40 percent reported it was either difficult or very difficult without 3M Fluency Direct. A lack of technical background did not prevent clinicians from experiencing positive results – in fact, a physician with only a basic technology background achieved the greatest productivity improvements.

**Customization tended to correlate with enhanced productivity.** Initially, the project team hoped that training the participants on a standard set of productivity tips and speech-enabled commands would lead to efficiency gains for everyone. However, they quickly discovered that different navigation commands, macros and smart phrases were impactful for clinicians depending on their role and Epic workflows – making customization a driver of efficiency. While it may not be feasible to offer one-on-one training to all clinicians, the Sutter Health team is considering persona-based training that would allow clinicians with similar documentation needs and workflows to take advantage of productivity-boosting functionalities related to their role.

**Strong users of the solution became advocates for the tool.** Study participants have promoted 3M Fluency Direct with other staff in a number of ways. When one participant was using the speech dictation functionality but not the productivity tools, other participants encouraged them to set up speech commands. Participants have also asked Dr. Sakumoto to make sure new staff get 3M Fluency Direct access. "Having those champions on the ground in the clinic is huge," Dr. Sakumoto said.

## Looking to the future

Because the study demonstrated that 3M Fluency Direct helped ease documentation burden for participants, the project team plans to identify lessons learned in order to expand the training and improve adoption across other clinics.

For Dr. Sakumoto, increasing adoption of speech-enabled clinical documentation is also an important mindset shift and step toward the future. "Ambient documentation is coming," he said. "Clinicians will need to verbalize the physical exam as they're doing it. Training clinicians to think and act differently takes time. So starting them with saying their commands out loud now – rather than when the technology is here – was definitely a strong motivator of mine going into this pilot."



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