# CASE STUDY

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ONPAGE

# SAGE & OnPage Teleneurology in action

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Many rural facilities and clinics do not have a neurologist on staff who can handle the medical needs presented by conditions such as stroke, spinal injuries or aneurysms. Additionally, some regional hospitals don't always have sufficient neurological staff to handle acute conditions. When patients come in and need neurological care, time is of the essence. By working with SAGE, rural hospitals and clinics can access top notch medical care almost instantly and save lives in the process.

#### **Business Situation**

SAGE sought an intelligent method with which to route alerts to physicians when one of the hospitals in its network had an immediate need for its teleneurology services.

In the past, when the rural facility would call into SAGE and ask for the attending neurologist, SAGE would page one of their neurologists in the hospital. However, the neurologist didn't always respond immediately. It could take up to 20 minutes before neurologist was alerted.

The difficulties with SAGE's legacy system can be summarized as follow:

- **Poor workflow**: The rural facility had to contact he hospital or the answering service which in turn paged the neurologist
- **No escalation**: If the first neurologist didn't respond, there was no automatic escalation to the next doctor
- **Lack of immediacy**: It could take up to 20 minutes before a neurologist returned a call from a rural facility
- **No audit trail**: There was no reporting of how long it took before a neurologist responded. As such, there was no way of monitoring success or failure

### Solution

OnPage's critical alerting technology reliably provides rural hospitals in the SAGE network the ability to get in-touch with a neurologist immediately. SAGE assures its clients a return call in under 5 minutes. However, in 95% of the cases, the call for a rural hospital is returned **in under a minute**. Only 5% of the cases require escalation to a second physician which causes alerts to be answered in under 3 minutes.

Today, OnPage handles 90% of all calls for a neurologist at SAGE. By switching to OnPage, SAGE has been able to **grow its business 7-fold** while **saving hundreds of thousands of dollars** from no longer using the administrative and answering service staff needed to route pages to their proper recipient.



# Why telemedicine

The shortage of neurologists places significant demand on hospitals to efficiently deliver inpatient neurology care. Teleneurology enables rural and remote hospitals to provide in-person consultation to mitigate the lack of neurologists on staff.

SAGE's neurohospitalists conduct live, video-enabled consultations that allow for rapid patient assessment and formulation of a treatment plan. Telemedicine shows its usefulness most prominently in the case of stroke. Rural hospitals know to look for the **FAST** signs in assessing a potential stroke patient:

(F)acial drooping: Is a section of the face drooping or hard to move(A)rm weakness: Inability to raise one's arms fully(S)peech difficulties: Difficulties with speaking or understanding speech(T)ime: If any of these symptoms are showing then the patient needs to be admitted immediately.

If the patient appears to present these symptoms, the attending doctor or nurse knows to contact the SAGE OnPage account. With stroke, if tPA – the only FDA approved drug to treat stroke - is not delivered within 4.5 hours after the stroke occurs, the possibility for a full recovery is vastly diminished. Immediate treatment is necessary to prevent the long term effects of the stroke and potentially death.

	Neurons Lost	Synapses Lost	Myelinated Fibers Lost	Accelerated Aging
Per stroke	1.2 billion	8.3 trillion	4470 miles	36 y
Per hour	120 million	830 billion	447 miles	3.6 y
Per minute	1.9 million	14 billion	7.5 miles	3.1 wks
Per Second	32 000	230 million	218 yards	8.7 h

TpA cannot be administered after 4.5 hours since the clot-busting drug will cause significant damage to the remaining brain tissue. This is why it is so important to identify stroke immediately.



# Reporting

At SAGE's central headquarters in Pasadena, California the company's Operations Administrator, Melinda Chiem, keeps track of the call volume, response time and any delays that are occurring in providing service to the hospitals and ultimately to the patients. She receives this information through OnPage's reporting system which allows her to also create graphs to physically represent the progress of the company's neurologists in meeting the needs of the hospitals.

The information from the reports is also compared against the statistics kept by clients to make sure they match. The reporting also allows SAGE to better analyze and forecast the clinics' needs.

## OnPage fills the need for immediate alerting and profitability

Time is of the essence in neurology, as every second lost can lead to brain damage in the patient. When a patient at a rural hospital in the SAGE network does present, the clinic calls up the SAGE OnPage account.





# In neurology, time is brain. Every second lost can lead to brain damage or loss of life.

The clinic is assured of receiving a response from an on-call physician in under a minute. When the doctor gets in touch with the facility, the doctor will then use video conferencing to communicate with the facility.

## **Summary and Benefits**

In years past, SAGE Neuro relied on pagers to alert neurologists to a rural hospital's needs. These were unreliable and ineffective in providing immediate access to doctors. Luckily for hospitals and the patients they treat, OnPage can provide immediate and secure alerting to neurologists. Through video hook-ups or other forms of consultation provided by telemedicine, the neurologist can diagnose and

