



Sweden's National Hotline

# Enhancing Patient Safety and Productivity

corti



**“Our more than 800 operators use Corti for safer and faster medical triaging. This has allowed us to significantly increase patient safety through protocol adherence, while reducing average call duration”**

Jannice Mattsson, former COO, SOS Alarm



# The Future of high-quality care

SOS Alarm is Sweden's nationwide emergency-service provider. They are responsible for more than three million calls annually, across emergency, fire, and police divisions.

A rising population in Sweden, combined with more demand for telehealth and a worker shortage, have exacerbated an already-existing need to support call takers through better protocol guidance.

Call takers at SOS Alarm use a specific protocol to assess patients; with questions covering health status, breathing, consciousness, and other critical pieces of information. Before engaging Corti, SOS Alarm had moved from paper-guided to digital-guided protocols. Many of these protocols came from one of the world's top medical institutions, where they had been extensively vetted. After having taken these protocols wholesale from paper to digital organization, however, SOS Alarm wanted greater insight into their effectiveness and to be able to identify where they could resolve any weaknesses.

## Key Challenges

- Citizens were frustrated with long EMS wait times
- SOS Alarm had no way to ensure that call takers were adhering to protocols
- SOS Alarm had no insight into protocol effectiveness



They knew they wanted a new decision-support process with security, safety, efficiency, and precision as key metrics for improvement.

Armed with research into novel solutions, SOS Alarm knew that technological innovation would be key to solving their needs while maintaining patient safety. This research quickly led them to Corti, a company with a strong track record for machine learning within high-pressure medical consultations across the United States and Europe.

Once they had engaged Corti, our systems were able to structure the dialogue and metadata of month-over-month operational data from 2022 along with current SOS Alarm calls in order to provide insights at scale regarding protocol weaknesses.

We then used the collected data to optimize protocol, ensuring that the questions asked in calls were as effective as possible. With a laser focus on key areas, questions were added or removed and advice was restructured. We used A/B split-testing with pilot users to understand when protocol changes drove their desired outcome.

Organizations like SOS Alarm know what they're doing, but these improvements enable us to find the small edits that can make a big difference across 3mill+ calls.

For example, we changed a question and subsequent documentation of the answer from asking if the patient has had seizures to asking if the patient has had a seizure. This clarified if the patient has had one or more than one seizure. In another instance, we condensed the number of questions around patient fever in order to streamline the conversation and provide clear wording.

Through our partnership, SOS Alarm continues to further analyze and refine their protocols. These findings don't need to languish in hours of staff training before SOS Alarm can act on them.

Camilla Nylén, Healthcare Operations Manager at SOS Alarm notes, *"Our medical staff use Corti to make protocol changes and distribute those to all operators at the click of a button, saving us time and money on continued staff training."*

## Key Results

- 14% reduction in call times within first seven months
- 17% increase in protocol adherence via easy editability
- 47% reduction in missed critical questions



Meanwhile, our data analysis discovered places where SOS Alarm could strengthen protocol adherence among call takers. We found that nurses had been frequently delivering advice and selecting priorities for calls manually rather than via the protocol. This armed SOS Alarm with better focus for training, and also suggested to us where processes could be improved to keep nurses on track. SOS Alarm added seven different priority buttons into Corti's protocol builder to help call takers find the right level of response faster when they have good reason to manually select an appropriate response.

The ability to easily improve the protocol has delivered a 17% increase in protocol adherence after adjustments were made.

All Patient Safety Answering Points (PSAPs) use a series of critical questions to ensure that they capture the most urgent safety risks as quickly as possible. These questions pinpoint the status of the patient's breathing, consciousness and other priority considerations. After working with Corti, SOS Alarm has seen an average of 47% reduction in missed critical questions, going from 58% to 78% compliance in capturing vital signs correctly.

Corti's Decision-Support System ensures that call takers do not miss asking critical questions. Because the process is automated, call takers actually spend more time listening to patients rather than dividing their attention between the caller and manually recording information. This has increased protocol compliance. By ensuring that call takers do not miss vital information, they triage more effectively without wasting valuable time and resources.

SOS Alarm decided to rapidly move forward, implementing both Corti's AI solution and completely new protocols that they designed at once. This created a steep learning curve and resulted in higher call times (up to 11 minutes) at the pilot center. But this combination quickly proved fruitful. Through data analysis capable of suggesting the highest impact protocol optimization plus Corti's protocol-editing tool, SOS Alarm was able to readjust the new protocols to maximize more efficient call handling. After the first six months of using Corti, call times decreased by 35%. SOS Alarm decided to expand their initial scope after this trial to all of their 15 call centers. Corti quickly implemented their new protocol and guidance tools to all 800 call takers, and calls have now seen a 14% reduction in time. Now the median call duration is approximately six minutes, while it had been approximately seven minutes before they implemented Corti.



By the numbers:

**14%**

Reduction in AHT improving  
emergency call responsiveness  
and throughput

**17%**

Increase in protocol adherence,  
improving triage accuracy

**47%**

Reduction in missed critical  
questions, improving patient  
outcomes



Now, Nylén notes, “Our more than 800 operators use Corti for safer and faster medical triaging. This has allowed us to significantly increase patient safety through protocol adherence while reducing average call duration.”

Happy with the initial results, SOS Alarm is further engaging with Corti to analyze 100% of their calls and continue finding areas of improvement in individuals, teams, and protocols, which they can quickly respond to.

This leads to numerous novel insights that would have been otherwise missed in traditional, manual quality assurance.

SOS Alarm understands that the power of the Corti application lies in the ability to constantly evolve, allowing protocols to be created, revised, and refined dynamically and rolled out across the call-taking community with high adherence and optimal outcomes.

Looking to the future, Camilla Nylén says, “Our partnership with Corti has been great. We’re very excited about the future as we know there’s so much more we can do together to impact patient safety.”





[Info@corti.ai](mailto:Info@corti.ai)