



Preventicus Managed Care Program

Stroke prevention by
smart cardiac monitoring and
integrated digital care management



About Preventicus

Our vision is to contribute to “healthy aging” by offering integrated care programs for screening, monitoring, diagnosis, and management of cardiovascular diseases, such as atrial fibrillation (AF).

Our mission is to reinvent the continuum of care by embedding state-of-the-art digital technologies, telemedical services, and IT ecosystems for all involved stakeholders into our programs.

Our solutions enable healthcare systems to significantly reduce their cost burden linked to stroke and chronic and acute cardiovascular events – effectively and cost-efficiently.

Stroke – leading cause of disability and death in the Middle East

In the United Arab Emirates, 10,000-12,000 patients suffer from stroke annually, which means every hour, one person in the UAE gets a stroke.¹

The deaths from stroke in the Middle East and North Africa region are estimated to nearly double by 2030.²

Much younger stroke patients in the UAE

Compared to the global average, where 80% of stroke patients are 65+ years, half of the stroke patients in the UAE are below the age of 45 years.¹

Stroke is responsible for high social and health-economic burdens

Approximately 1.1 million people suffer a stroke each year in Europe.³ These stroke incidences result in a total cost of 60 billion Euros, among which only 45% is direct medical costs. The remaining 55% is indirect costs.⁴

Nine out of ten strokes are avoidable.

The main risk factors include undetected cardiac rhythm disorders, primarily AF. In fact, undetected and untreated AF is associated with a fivefold increased stroke risk and the 24h ECG (Holter-ECG) in standard care fails to detect 75% patients with AF.

Therefore, early detection of AF – meaning cost-effective large-scale screening in combination with subsequent diagnostics (with 14days ECG) – and care management are the focus of Preventicus Managed Care Program.

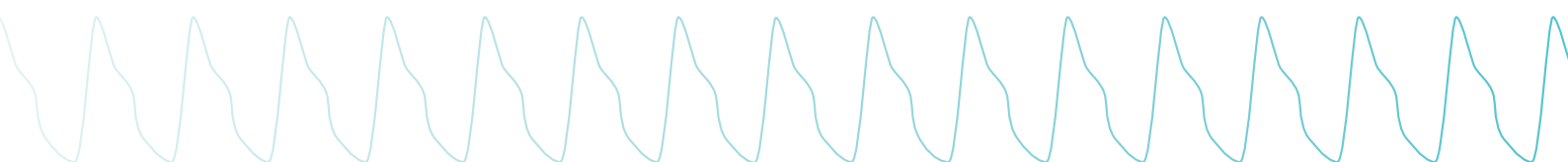
Sources:

¹ <https://www.khaleejtimes.com/news/uae-health/one-in-every-hour-gets-stroke-in-uae>

² <https://pubmed.ncbi.nlm.nih.gov/20541222/>

³ <https://www.escardio.org/Journals/E-Journal-of-Cardiology-Practice/Volume-18/stroke-as-interdisciplinary-disease-what-the-practising-cardiologist-can-do>

⁴ <https://journals.sagepub.com/doi/full/10.1177/2396987319883160>



Preventicus Managed Care Program

Developed by medical and population health experts, easy to implement and to govern, the Preventicus Managed Care Program offers transparent, secure, and innovative prevention. Invest in the health and longevity of the citizens. Be a leader in cutting-edge, smart stroke prevention.

Module 1: Atrial fibrillation (AF) screening



1. Measuring

It starts with a cardiac screening. Using the Preventicus®Heartbeats App, the citizen carries out regular checkups of heart rhythm.

The simplicity of measurement makes the check accessible to everyone. If the algorithms detect irregularities, the Telecare Center is immediately notified.

2. Validating

Medical technicians at the Preventicus Telecare Center validate the measurements: plausible and free of artifacts?

As soon as the results are confirmed, the user gets a notification about possible AF.

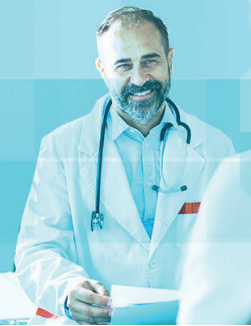
3. Guiding

By means of the Preventicus Heartbeats App, the citizen is referred to an associated local cardiologist or telecardiology center to arrange an appointment.

Here ends the stage of screening in high-risk populations (secondary prevention) and the diagnosis, inhibition of disease progression, and reduction of potential complications (tertiary prevention) start.

Implement coordinated protection for risk groups

Together with cooperating organizations – governmental authorities, health insurers, clinics, cardiac centers, and physicians – we develop a sustainable network of Managed Care. By bringing regional and national disease prevention strategies into practice and to excellence, patients profit from help on time provided by professionals and augmented by digital innovations from Preventicus.



Module 2: Atrial fibrillation (AF) confirmation by local cardiologists or telecardiology



4. Monitoring

The cardiologist applies the 14-day telemetric ECG.

The patient will be monitored with a multichannel chest wall ECG patch – a wearable device provided as a part of the Preventicus Managed Care Program.

Collected data is transferred to the Telecare Center and to the cardiologist.

5. Reporting

The medical technicians from the Telecare Center continuously check whether the abnormal ECG segments are plausible and free of artifacts.

Within these 14 days of telemetric ECG, the cardiologist will receive a summary report from the Telecare Center with relevant ECG segments.

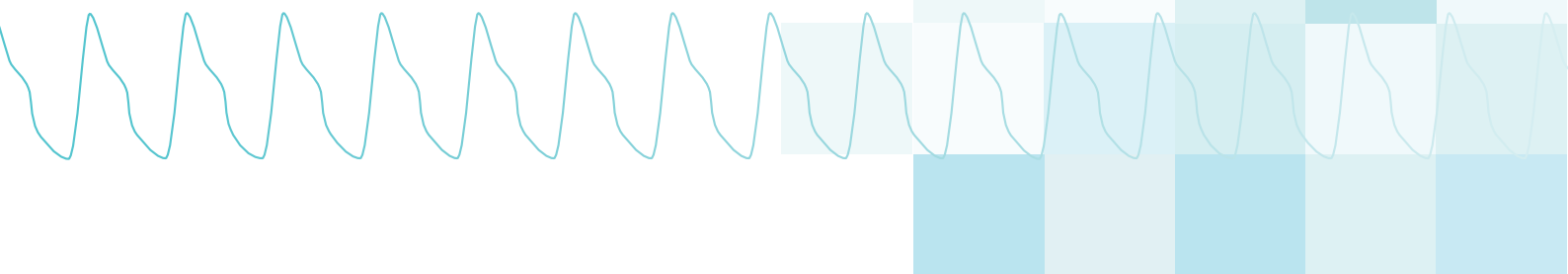
6. Diagnostics and Treatment

The cardiologist makes the final diagnosis and provides the patient with diagnosed AF with an appropriate treatment recommendation (e.g. long-term blood-thinning medication, also called anticoagulants, for stroke prevention).

Then the patient is referred to standard care.

Centrally operated, locally tailored

Having constant feedback on the outcomes reported in the health-economic analyses, the scope and goals of the Managed Care Program can be flexibly adjusted to regional or national conditions. Well-managed, active stroke prevention improves healthy aging and reduces the burden on relatives of stroke patients, as well as on health and social care systems.



Connected IT platforms are the backbone of our comprehensive & fully digitally managed care program

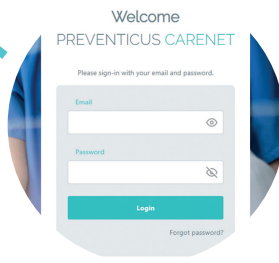
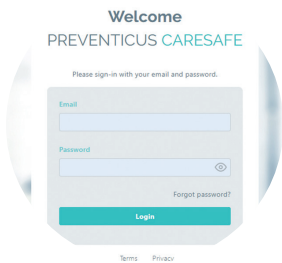
PREVENTICUS HEARTBEATS & NIGHTWATCH

Screening & monitoring
Smartphone and wearable apps
for end users and patients



PREVENTICUS TELECARE PLATFORM

Professional data verification
Platform for medical professionals
and telecardiology providers



PREVENTICUS CARESAFE PLATFORM

Full digital care management
& reimbursement handling
Platform for health insurers and
national health providers

PREVENTICUS CARENET PLATFORM

ECG service and reimbursement handling
Platform for participating cardiologists

Proven clinical evidence

From the first concept to the evaluation and continuous refinement, Preventicus has been working closely with cardiologists, scientists, engineers, patients, and population health experts. For us, the guiding principle has always been on matching medical knowledge with what digital technologies offer today.

Scientific research demonstrates the legitimacy of the use of the Preventicus[®] Heartbeats App and Preventicus Nightwatch[®] for stroke prevention. In the most recent international studies on over 1,300 participants (Watch AF¹ and Detect AF Pro²), it was shown that the app detected atrial fibrillation (AF) with an accuracy of approx. 96%. The positive predictive value was over 99%, which means that independent cardiologists subsequently confirmed AF recognized by the Preventicus Heartbeats App in over 99% of the cases.

Of course, all the analyses are based on anonymized data because your patients' privacy is at the heart of what we do.

Sources:

¹ <https://electrophysiology.onlinejacc.org/content/5/2/199?download=true>

² <https://academic.oup.com/europace/article/21/1/41/5062933>

³ <https://thehealtheconomicreview.biomedcentral.com/articles/10.1186/s13561-020-00274-z>

Proven cost-effectiveness

The Managed Care model has also been assessed from a health-economic perspective: the analysis³ revealed the positive cost-effectiveness within approx. three years for statutory health insurers in Germany. Please note that Germany is the most complex payor market in the European Union.



"A cost-effectiveness analysis model of Preventicus atrial fibrillation screening from the point of view of statutory health insurance in Germany" was published at Health Economics Review on June 9, 2020. Authors: Ralf Birkemeyer, Alfred Müller, Steffen Wahler & Johann-Matthias von der Schulenburg.

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