



Vitacam[®]

**Scalable, affordable and accurate vital signs
measurements from a camera**

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VITACAM MEASURES VITALS USING COMPUTER VISION

CE class IIa medical device

➔ Digital video as input | Server processing

- ✓ Takes digital video as input from a smartphone or camera
 - Not tied to specific devices – more affordable than dedicated devices
- ✓ Captures Respiratory Rate using computer vision within 3 breaths per minute
 - Analyses chest movements to get the respiratory rate
- ✓ Captures Heart Rate pulse within 5 beats per minute
 - Analyses changes in the subject's face colouring to obtain the heart rate
- ✓ Reports changes to responsible clinician and carer
 - Simple interface to view changes





RESPIRATORY RATE NEEDED DURING ED TRIAGE

- Patient assessment is based on obs and vitals
- Respiratory rate is used as one component
- Few tools available to measure the RR, excluding manual counting which can be unreliable.
- Manual counting values skew strongly to a textbook estimate of 18-20 breaths instead of a normal distribution.

VITACAM WORKS AUTOMATICALLY IN THE BACKGROUND

- Vitacam is installed on a local server in hospital network
- Uses a Logitech Brio webcam
- Results are updated on the nurse's PC
- No data leaves the hospital

BENEFITS

- Simple & easy to use, no need for manual counting
- Reduce physical contact and contamination risk

EMERGENCY DEPARTMENT TRIAGE

inDemand co-creation

Vitacam®



TARGETING CARE HOMES & DOMICILIARY CARE

- COVID-19 exposed the gaps in communication between elderly care and primary care
- ~3m elderly residents in Europe in 50k care homes
- An ageing population
- People over 85 account for 25% of all bed days (e.g. UK)

A TRULY SCALABLE SYSTEM FOR AN UNMET NEED

- Video clips can be recorded from a dedicated app
- Vitacam securely processes the video on a public cloud server
- The data and trends are shown on a web dashboard.

BENEFITS

- Overall efficiency gain to health system from daily monitoring: €20k per year per nursing home (SEHTA, UK study).
- Possible to record info digitally instead of paper and pen
- Improved communication between carers, elderly and GPs

VITACAM CAN ALSO HELP CARE HOMES MONITOR ELDERLY

Collaboration with Oulu Welfare Labs

INTERNAL LAB TESTING

REAL-WORLD TESTING



Functionality & Stability



Focussed



Usability



Clinical

Automated & manual
Testing use cases,
performance and stress

Light & distance study
Testing with different lights
and distances

Oulu Welfare Labs
Kataja: Testing with care staff
and elderly

OYS Testlab
OYS pilot: co-creation and
clinical data

IEC 62304, ISO 13485

IEC 62366, ISO 13485

IEC 62366, ISO 14971, GDPR

EU MDD/MDR, GDPR

Continuous

Continuous

In progress

First part completed

MEDICAL DEVICE TESTING MUST INCLUDE REAL-WORLD

Oulu Welfare Labs & Testlab critical in testing

Vitacam Triage in use

A screenshot of a video player showing the Vitacam Triage logo. The logo consists of the word "Vitacam" in a bold, white, sans-serif font, followed by a registered trademark symbol (®), and the word "Triage" in a lighter, white, sans-serif font. The text is centered on a solid pink background. The video player has black bars at the top and bottom.

Vitacam[®] Triage

[Link to YouTube video on Vitacam Triage](#)

GET IN TOUCH

Where we're at

Market making

- CE certification done.
- Direct sales channels built.
- Proven the technology & gaining credibility.

Growth: API volumes

- Enhanced product with more vital signs: R&D needed.
- Scalable distribution.



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