Initiative summary

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mHealth Practice: *aces-rwm*™ (automation in care and evaluation of system with real world monitoring)

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Topics

aces-rwm™ has a successful approach on the following topics:

- Monitoring and Evaluation
    - **Monitoring and evaluation**
    - **Continuous improvement**
    - **Quality control**

Summary

aces-rwm™ is a health ecosystem created collaboratively by all the public eye clinics of the university hospitals in Finland. At its core there is real-world monitoring and a holistic care delivery model for eye diseases. The aim is to preserve the best possible wellbeing and eyesight of the citizens with the available resources. A set of resource-governing principles is in place to deal with increasing demand and limited resources. Real-world monitoring of clinical parameters, health-related quality of life and costs allows evaluation and cross-comparison of eye care systems and clinical settings at national and international level. *aces-rwm*™ has the potential to improve resilience in health systems and it can be adapted to any medical discipline.

Scope of the mHealth practice

How long did it take for the mHealth practice to be implemented?

It took 15 years from idea to practice.

What is the status of the solution or initiative?

Fully operational across Finland with the participation of all the five public eye clinics of the university hospitals Helsinki, Tampere, Kuopio, Turku and Oulu and with collaborations with other European eye clinics.

What are the key steps that were undertaken?

1. Developing a holistic care delivery model for eye diseases that takes into account increasing demand and limited resources (resource allocation principles).

2. Piloting the model at regional level including continuous monitoring for its outcomes at patient and system level (real-world collection and monitoring of structured data using automation and visualisation of clinical parameters, health-related quality of life and costs).

3. Gathering support from other public eye clinics for its upscaling.

4. Developing and implementing a digital innovation strategy in order to upscale the eye care model, evaluate and benchmark real-world outcomes and cost-effectiveness at national and international scales.

What are the strengths and weaknesses of the implementation process?

Strengths: the increasing digitalisation of health care enabled the automation in the collection of the required parameters; stakeholder involvement at all levels from patients, to healthcare professionals, management and payers (municipalities).

Is there a workplan that can be included as a reference? Is there further documentation about the approach?

Yes; for the key principles of the model and collected parameters please see _aces-rwm_TM, Tays Eye Centre, Tampere, Finland

For more information on the conceptualisation and implementation:

Right services to right patients at right time in right setting in Tays Eye Centre

A comprehensive model for measuring real-life cost-effectiveness in eyecare: automation in care and evaluation of system (_aces-rwm_TM)

Stakeholders' involvement

What stakeholders needed to be involved for the good practice to work?

- A dedicated healthcare workforce, as the good practice involved standardisation of processes and task differentiation.
- Patients, as shared care is key to the model.
- Municipality, as payers of the eye care services.

What are the stakeholders' roles and activities/effort?

The stakeholders' role is the routine, efficient and unselective measurement of what gets done in everyday practice i.e. the collection of all real-world data of all patients. This allows the evaluation and comparison of eye services at national and international level. Additionally, they advocating for the dissemination of the strategy to optimize real-life effectiveness, sustainability and outcomes of the service delivery in ophthalmology at international level.

How was involvement and buy-in of the stakeholders secured?

The variability of the health services in health outcomes and access have pushed the national authorities to move into largest ever health care reform and recruit the medical leadership required. Getting the healthcare workforce on board at regional and national level involved reflection on their responsibility and role in maintaining the focus on system's purpose i.e., ethical choices for equitable and sustainable care.

Barriers/Obstacles

Conflicting or lack of political and financial incentives

Success factors

Key to the success of the project is the medical leadership exhibited and the consensus and collaboration reached by all Finnish university eye clinics regarding collection and evaluation of real-world outcomes data. This was further facilitated with technology advances such as digitalisation of health services e.g. the introduction of electronic health records and automation.

Securing funding at national level by Business Finland, the Finnish government organisation for innovation and trade for the procurement of advanced IT services

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Lessons learnt

What were the main outcomes of implementing the mHealth solution?

The outcomes were multi-level:
- *at patient level*: maintaining wellbeing and eyesight, prevention of disability (permanent visual impairment); reduction in waiting times.
- *at clinician level*: lean work flows optimizing the skills of different health care professionals within multidisciplinary teams;
- *at system level*: real world evaluation and comparison of eye care systems and departments at nationally and international level (benchmarking);
- improved efficiency of local and national delivery of eye services;
- informing large scale health reforms as the principles of the care delivery model have been introduced in the recommendations for the national health and social care reforms in Finland.

Continuous learning and outlook

What would you have done differently?

At this point, nothing. What has emerged as learning is that legislative changes can help to create the right conditions, but in order to build a health care ecosystem bottoms-up as in *aces-rwm*^{TM}, it requires hard work of the workforce and partners in local places and systems up and down the country to make a real difference.

What are the future plans for exploiting the mHealth solution?

International implementation of the data collection and evaluation tools (independent of the health care systems and their financing).

Other additions and highlights of important aspects identified

The *aces-rwm*^{TM} approach can generate real-world insights and resilience in health systems as it is adaptable to any medical discipline. It is hoped that its continuous evaluation in ophthalmology and dissemination of results will lead to additional upscaling across Europe and transferability to other medical disciplines.

Tays Eye Centre is currently a 3* Reference Site for its work on improving effectiveness of the healthcare system to the benefit of patients and doctors and has presented its case on, in the webinar run by the European Commission entitled *Promoting the Reference Site concept at regional, national and European level* in September 2020. Unfortunately, there is no recording of the Webinar.

References

1.Tuulonen A, Kataja M, Aaltonen V, Kinnunen K, Moilanen J, Saarela V, Linna M, Malmivaara A, Uusitalo-Jarvinen H. A comprehensive model for measuring real-life cost-effectiveness in eyecare: automation in care and evaluation of system (*aces-rwm*™). *Acta Ophthalmol.* 2021 Jul 14. doi: 10.1111/aos.14959. Epub ahead of print. PMID: 34263537.

2. Optomed develops an IT system for the Finnish University Eye Clinics)