Nordic Practice – eHealth-Erfahrungen aus Dänemark

Experiences and Perspectives

Dr. M. Heidenheim Department of Dermatology, Roskilde Hospital, Roskilde, Denmark

„Ist eHealth eine Lösung für regionale Disparitäten in der Gesundheitsversorgung"

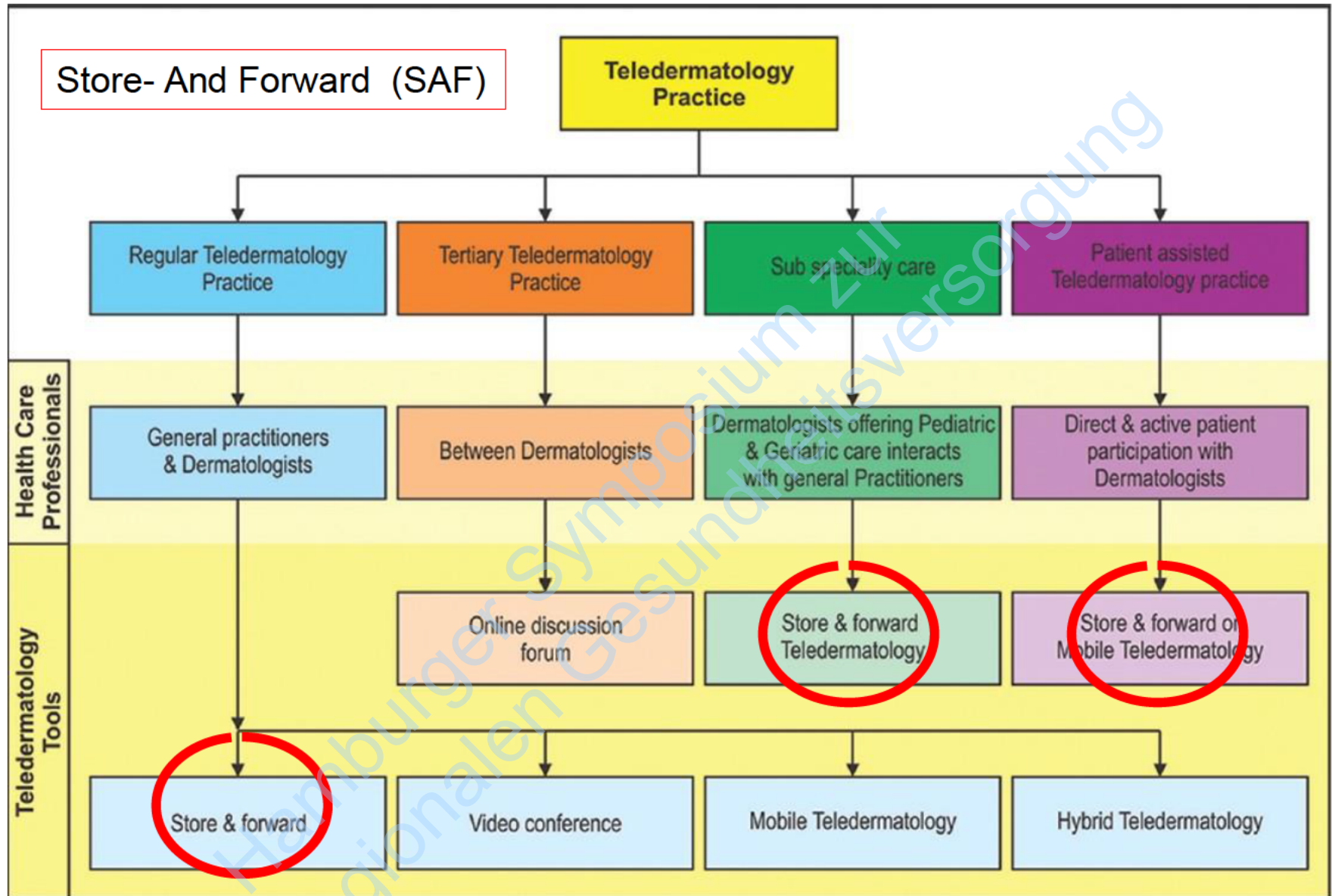| 10.10 – 11.50 | Impuls-Referate und Begrüßung | **Hoffmann:** Regionale Disparitäten in der Gesundheitsversorgung – wo stehen wir? |
| | | **Fegebank:** Grußwort der Senatorin (ca. 10:55h) |
| | | **Heidenheim:** Nordic practice – eHealth experience from Denmark |

How to Work as Teledermatologist
On
The Faroe Islands

Teledermatology – Universal model Global Solution

One-Size-Fits-All

Store- And Forward (SAF)

Teledermatology Practice

| Regular Teledermatology Practice | Tertiary Teledermatology Practice | Sub specialty care | Patient assisted Teledermatology practice |

Health Care Professionals

| General practitioners & Dermatologists | Between Dermatologists | Dermatologists offering Pediatric & Geriatric care interacts with general Practitioners | Direct & active patient participation with Dermatologists |

Teledermatology Tools

| | Online discussion forum | Store & forward Teledermatology | Store & forward or Mobile Teledermatology |

| Store & forward | Video conference | Mobile Teledermatology | Hybrid Teledermatology |

The Faroe Islands

18 Islands
33 GPs
2 main hospitals
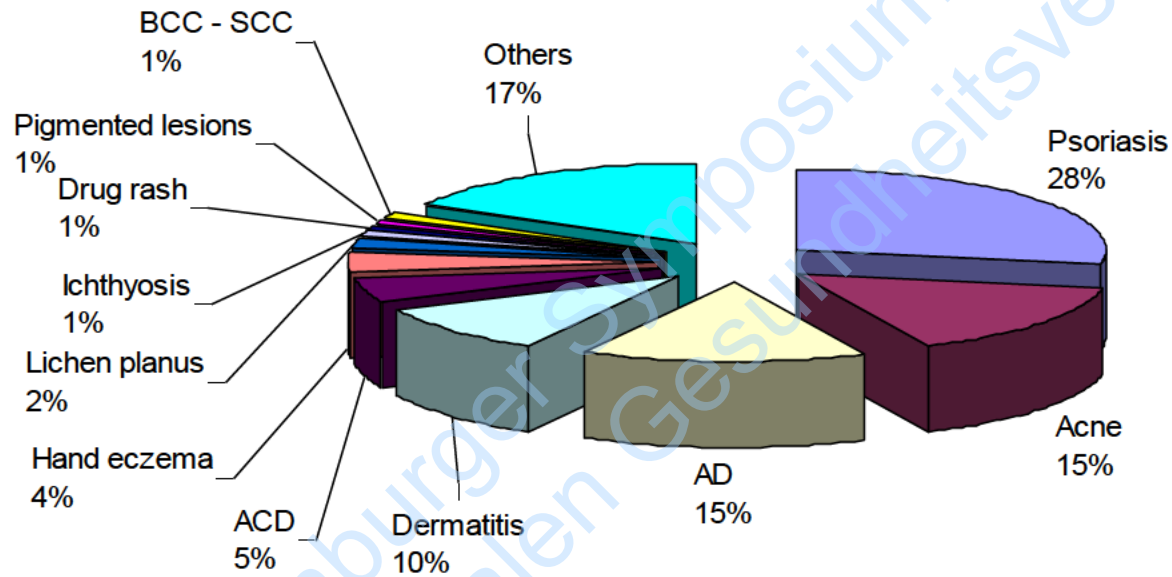No permanent Dermatologist
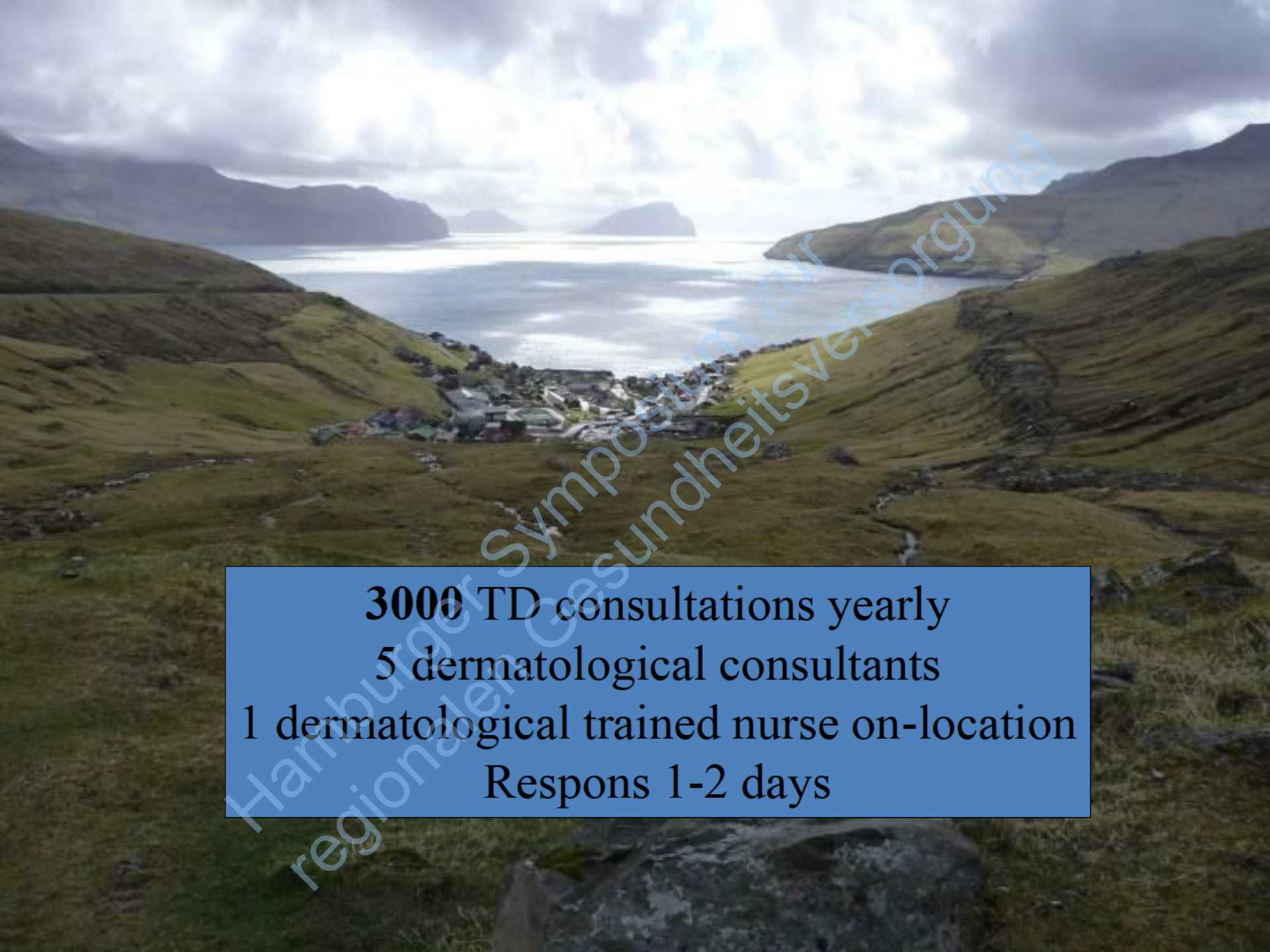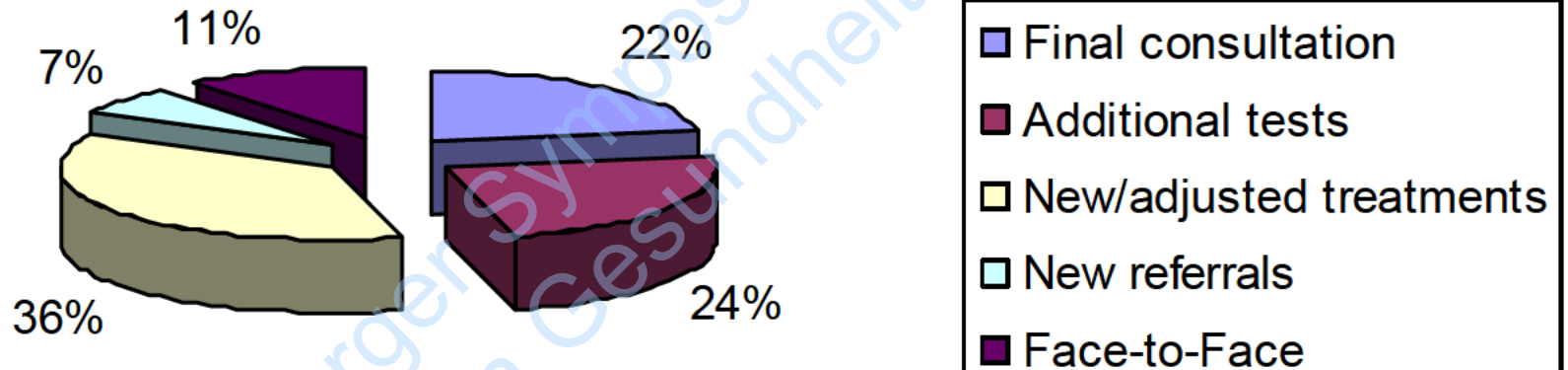
Remote distances

3000 TD consultations yearly
5 dermatological consultants
1 dermatological trained nurse on-location
Respons 1-2 days

TD Diagnoses

TD - consultations

How to Work as Teledermatologist

Capability to diagnose at a distance
Draw conclusions from few clinical informations
Interpret over-all clinical pictures + close-up
Interpret "selfies"
Establish tentative diagnosis and treatment plans

Conditions
Investigations often needed
Biopsies
Swaps
Laboratory **tests** for fungal infections
Blodsamples
Full medical records
Dermoscopy
Xray-CTscan-MRscan-PETscan

Coordinate
Treatment guidelines

Interdisciplinary
communications

How to Work as Teledermatologist

WHAT DOES IT REALLY TAKE?

Optimal clinical pictures
Focused clinical history
Essentiel data
Past and present treatment
Present vital status
Nursering support

Success
Failure

Suboptimal clinical pictures
Unfocused clinical history
Mixed data
Polyfarmacia
Major comorbidity
Noncompliant patients

THE NURSE IS ON HER WAY!

MODALITIES

Store-and-forward: Sending or forwarding stored digital images and associated patient data to a distant site provider or patient.
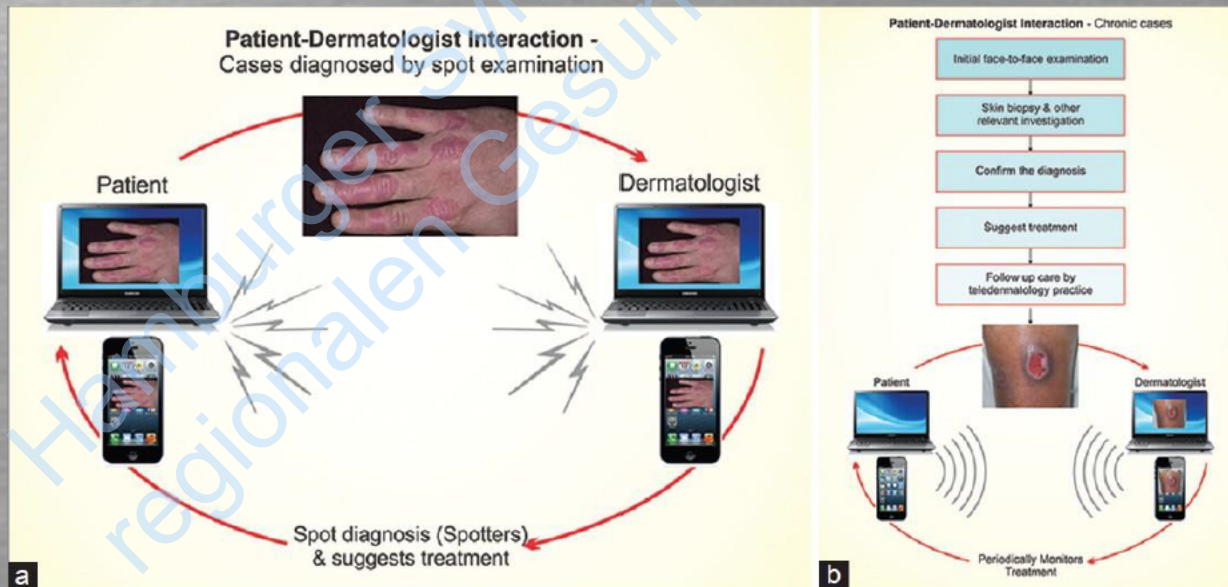
Live-interactive: Providers and patients interact via live video. A variety of peripheral hardware attachments may be utilized to enhance the consultation.

USES

Direct-to-patient: The patient sends images or interacts live, directly with the dermatologist.

Triage/consultative for inpatients and outpatients: Another physician sends images or interacts live with a dermatologist for either consultation or triage.

Patient-Dermatologist Interaction -
Cases diagnosed by spot examination

Patient

Dermatologist

Spot diagnosis (Spotters) & suggests treatment

a

Patient-Dermatologist Interaction - Chronic cases

Initial face-to-face examination

Skin biopsy & other relevant investigation

Confirm the diagnosis

Suggest treatment

Follow up care by teledermatology practice

Patient

Dermatologist

Periodically Monitors Treatment

b

Selfie (n.):
a picture taken of a person
by that person

shaken and **stirred**

PHOTOGRAPHY TIPS FOR BEGINNERS

Taking control of your camera

VS

FULL BODY EXAMINATION

Digital Photo Professional

Close-up photo is crucial

Skin lesion

↓

History & Examination www.pcds.org.uk

Benign ← → Malignant

Dermoscopic evaluation

| Benign | AK | Melanocytic | Unknown |
| Seb. Keratosis Dermatofibroma Angioma Sebaceous glands | Bowens BCC | | |

Benign   Melanoma

Unknown – red flags

Pustular rash on the face - Rosacea

Blistering rash - Bullous pemphigoid

Red scaly rash of psoriasis

Red scaly rash with erosions on the surface- Asteatotic eczema

Hamburger Symposium zur regionalen Gesundheitsversorgung

Close-up

Management

Complex case
Need for intervention

directly to E-consultation

Referral

Self-limiting

Should go elsewhere
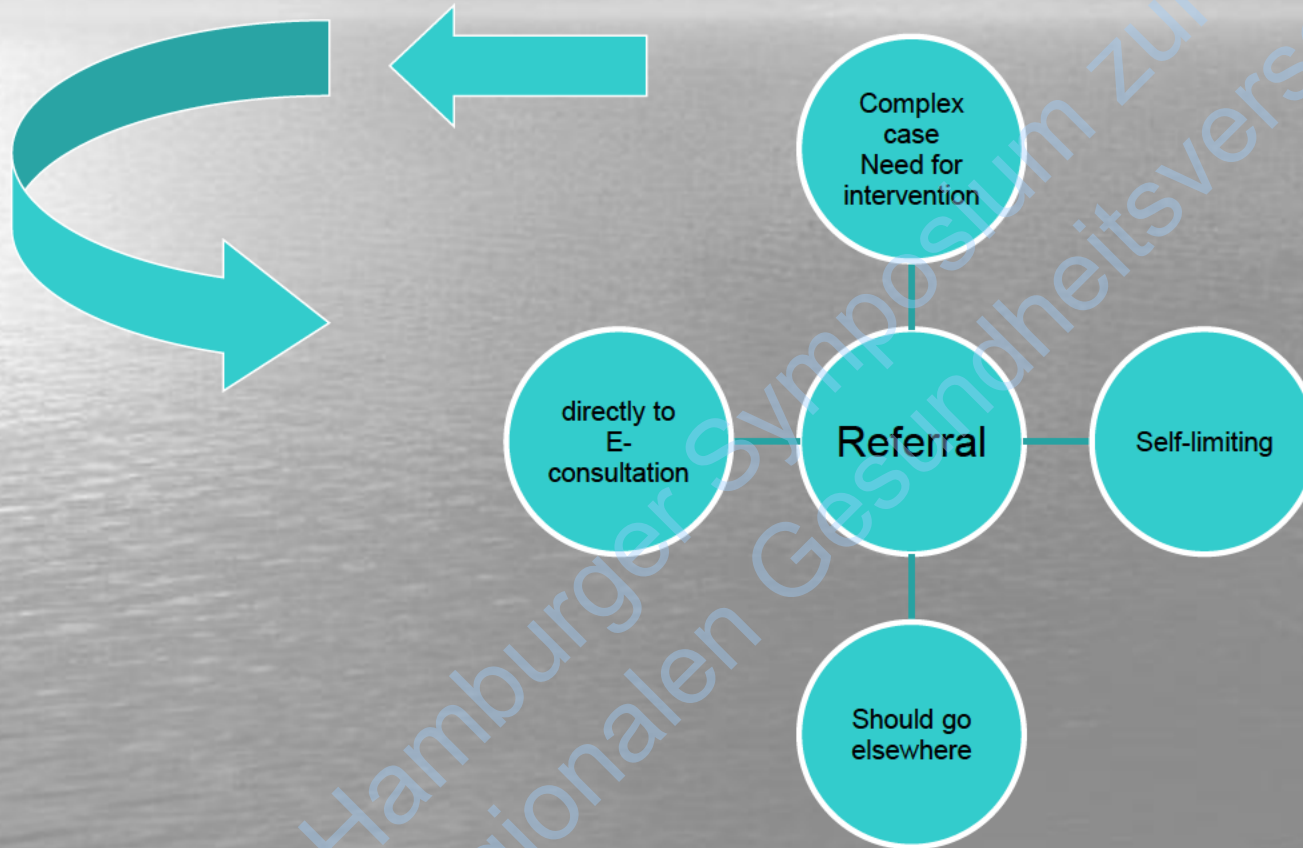
LOGISTIC

Preclinical selection of patients suited for
> **TD only**
> **Face-to-face** consultation

Inclusion or exclusion of patient cases

Preclinical planning for investigation

GP Instructions for diagnostic procedures to be performed

Establishment of Treatment guidelines
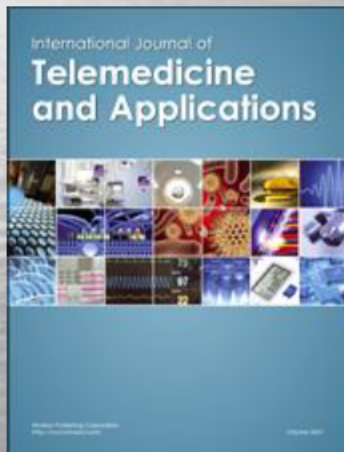
TD STUDIES
Diagnostic
Reliability & Accuracy
Precision
Management
Clinical outcomes
Patient satisfaction
Economic analyses

Teledermatology for diagnosis and management of skin conditions: a systematic review (Provisional abstract)
Centre for Reviews and Dissemination
Original Author(s): Warshaw EM, Hillman YJ, Greer NL, Hagel EM, MacDonald R, Rutks IR and Wilt TJ
Journal of the American Academy of Dermatology, 2011, 64(4), 759-772.e21

Teledermatology : systematic review and economic assessment (Provisional abstract)
Centre for Reviews and Dissemination
Original Author(s): Ferrandiz Pulido L, Moreno Ramirez D, Nieto A and Villegas Portero R
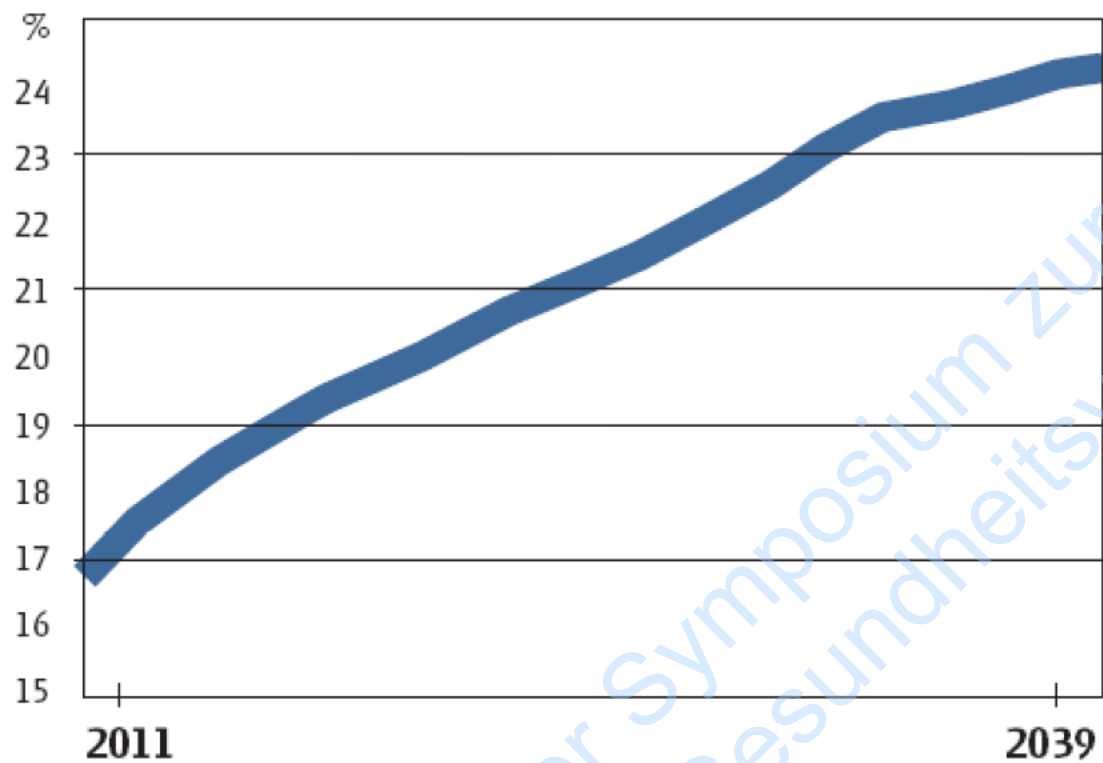2006, 143

Overall Conclusions

1. Diagnostic accuracy of in-person dermatology is better than SAF teledermatology

2. Diagnostic concordance of SAF teledermatology with in-person dermatology is acceptable

3. Management concordance is moderate to very good

4. Limited data on management accuracy, clinical outcomes

5. Pt satisfaction/preference good; dep on distance

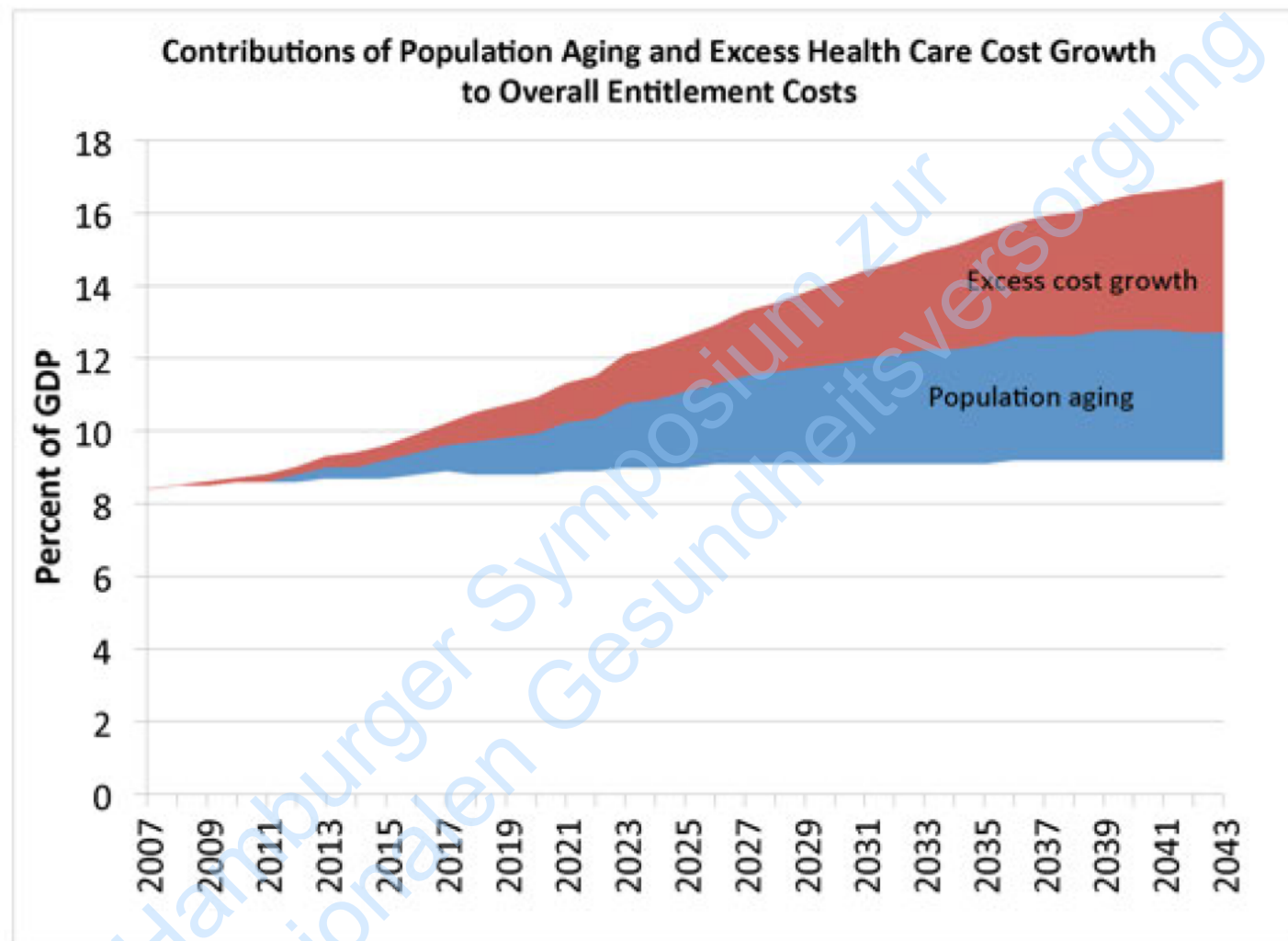6. Cost-effectiveness also dep on cost usual care, distance, & volume

Contributions of Population Aging and Excess Health Care Cost Growth to Overall Entitlement Costs

How to Succeed in Teledermatology

1. Patients willing to co-operate
2. Motivated physicians
3. Committed Staff assistance
4. Dedicated and competent specialists
5. User-friendly electronic devices
6. secured technical access
7. **Standard TD service supplied by conventional face-to-face consultations**
8. Proven evidence for usefulness
9. Financial and political support.

How to Succeed in Teledermatology
And
How to Keep up the Spirit

Having the patients confidence
       diagnostic accuracy
       useful treatment guidelines

Offering good clinical service – having no complaints

Informative mutial communication among specialist and GP

Looking at GP progress to handle dermatological patients by themselves

How to Fail in Teledermatology

- ➤ Slowly-working technical equipment
- ➤ Insufficient clinical information –
- ➤ Poor quality Clinical pictures
- ➤ Inadequate specialist evaluation
- ➤ Inadequate instructions for patient care
- ➤ Leav

If TD patients ... re and guidelines. they are easily

take care!

- don't answer a question by adding a question
- don´t use impersonal or automatic generated standard answers
- don´t leave problems unsolved

How to Use Teledermatology Wisely

Points to Consider – before TD implementation

1. **Triage** - preclinic selection of patients

2. **Clinical advice** or **treatment decision** for the referring physician

3. **Clinical advice**, **treatment decision** and **monitoring** for the patient

4. **Supplement** to face-to-face consultations

5. **Replacement** for face-to-face consultations

6. **Real-Time** or **Store-and-Forward**

7. A Nice-to-Have or Need-to-Have facility

Choosing the right TD solution
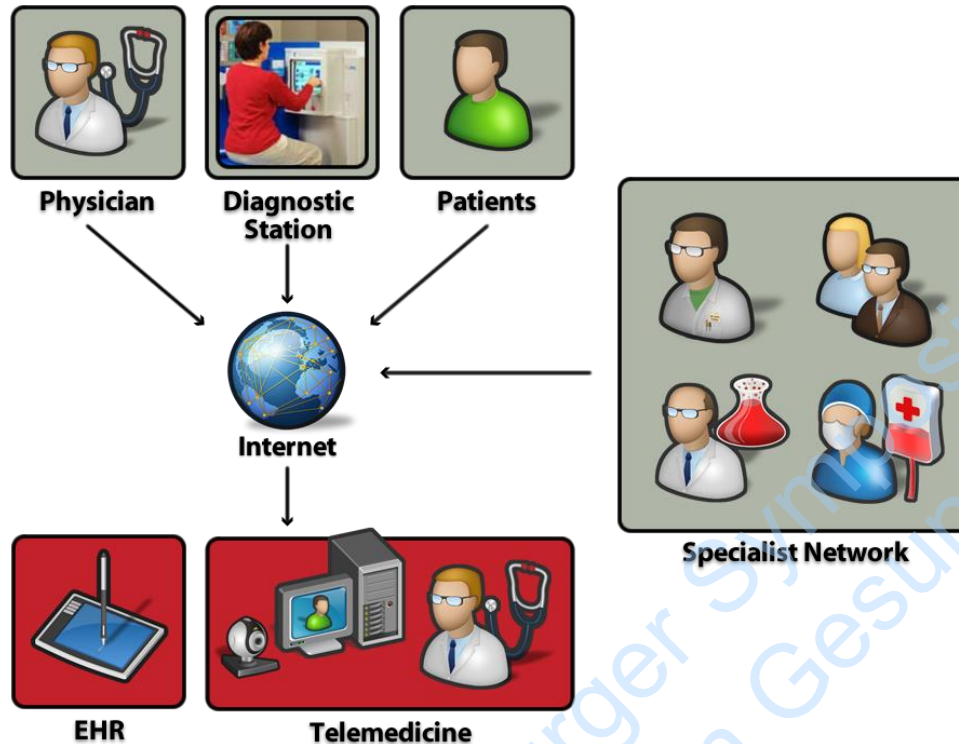
Know the expectations :

Do the target group expect daily service on a 7/24-demand ?

Do they expect advice or specific treatment programs ?

Do they expect a full service including continuous control and monitoring ?

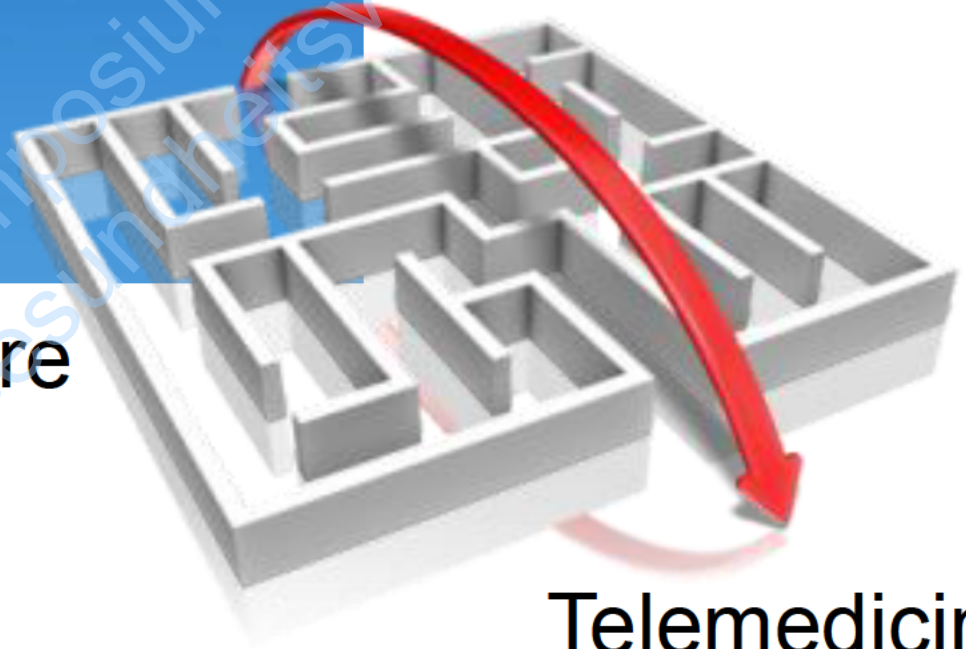Who is responsible for the outcome ?

POINT OF VIEW

1. Fast access to specialists

2. Reduced waiting- and travel times

3. Precise diagnostic procedures

4. High quality management of patients

5. Financial savings

Telemedicin

Short cut this way →

DEAD END
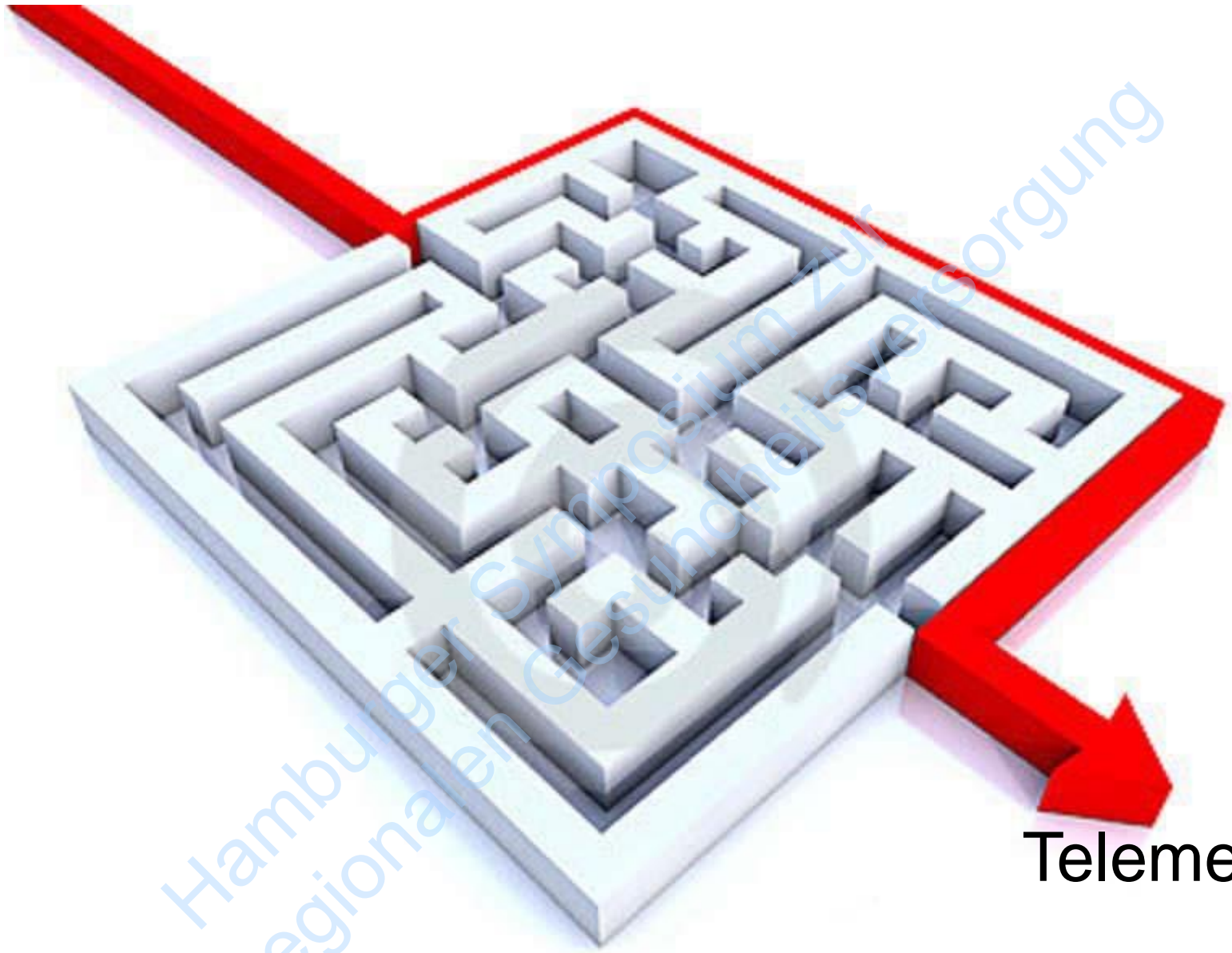
eHealthCare

Telemedicin

The Danish TD solution for the Faroe Islands

1. Is TD actually a cost-saving technology ?

2. Does TD reduce secondary care referral rates ?

3. What is it's clinical and educational value ?

4. Who profits the most of TD
   - the patients or the doctors ?

5. Is the Faroe solution
        an affordable universal TD model
        of high professional quality ?

Challenges

eHealth
mHealth

Mobil devices iPhones, PDA, smartphones, tablets

Social media – Facebook

TeleSkin

home

skinScan™
mole history

Left arm (front)
Last scan: 05.01.2012. | 5 scans
Highly Suspicious Lesion

Right arm (back)
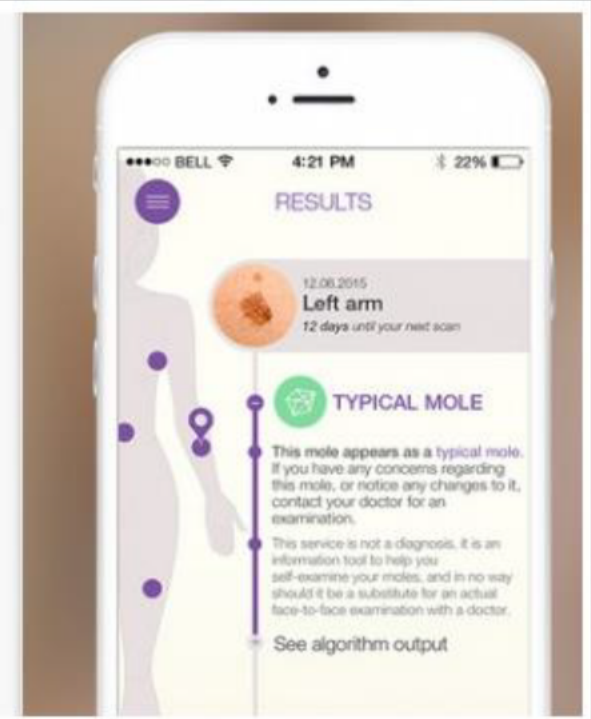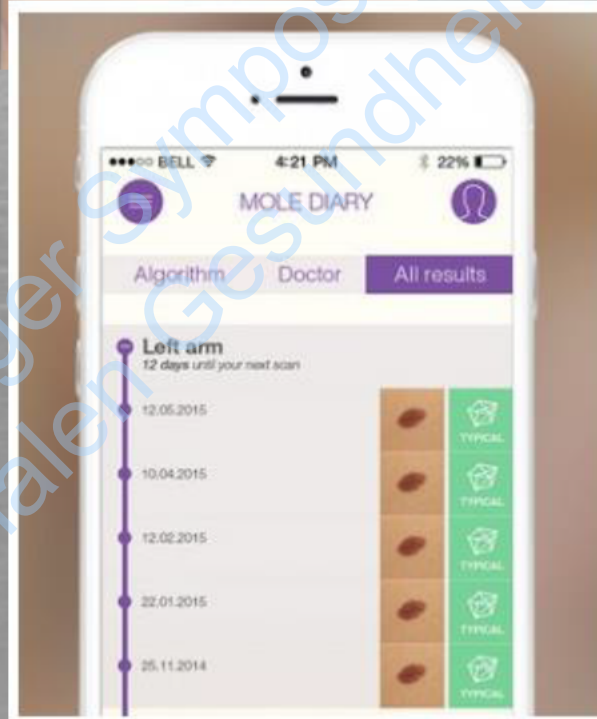Last scan: 05.01.2012. | 1 scan
Medium Suspicious Lesion

Chest
Last scan: 05.01.2012. | 1 scan

European Commission

EUROPEAN COMMISSION

"Healthcare in your pocket"

●●●○○ BELL 📶   4:21 PM   ⚡ 22% 🔋
MOLE DIARY

Algorithm   Doctor   All results

Left arm
12 days until your next scan

12.05.2015   TYPICAL
10.04.2015   TYPICAL
12.02.2015   TYPICAL
22.01.2015   TYPICAL
25.11.2014   TYPICAL

●●●○○ BELL 📶   4:21 PM   ⚡ 22% 🔋
RESULTS

12.06.2015
Left arm
12 days until your next scan

TYPICAL MOLE

This mole appears as a typical mole. If you have any concerns regarding this mole, or notice any changes to it, contact your doctor for an examination.

This service is not a diagnosis, it is an information tool to help you self-examine your moles, and in no way should it be a substitute for an actual face-to-face examination with a doctor.

See algorithm output

Telemedicine
websites and smartphone apps

Available on the App Store

ANDROID APP ON Google play

DermatologistOnCall®

Get Online Dermatology Care Right Away!

Visit with a board-certified U.S. dermatologist online - on your time - for skin, hair, and nail treatment that's fast, secure, and good for you!

DirectDerm™
Expert Diagnosis. Personal Care.

Your Skin Problem Can't Wait.
Consult a Board-Certified Dermatologist Now

LET'S GET STARTED

Diagnosis in 48 Hours, Usually Less

DOCTORS TRAINED BY THE BEST, BACKED BY EXPERIENCE

Quality Among TelemedicineWebsites and Apps Treating Skin Disease

16 Telemedicine websites

The care services lack transparency, choice, thoroughness, diagnostic and therapeutic quality, and care coordination

- Diagnostic performance was poor
- Major diagnoses were repeatedly missed
- Websites regularly failed to ask simple relevant questions
- Treatments prescribed were at odds with existing guidelines.
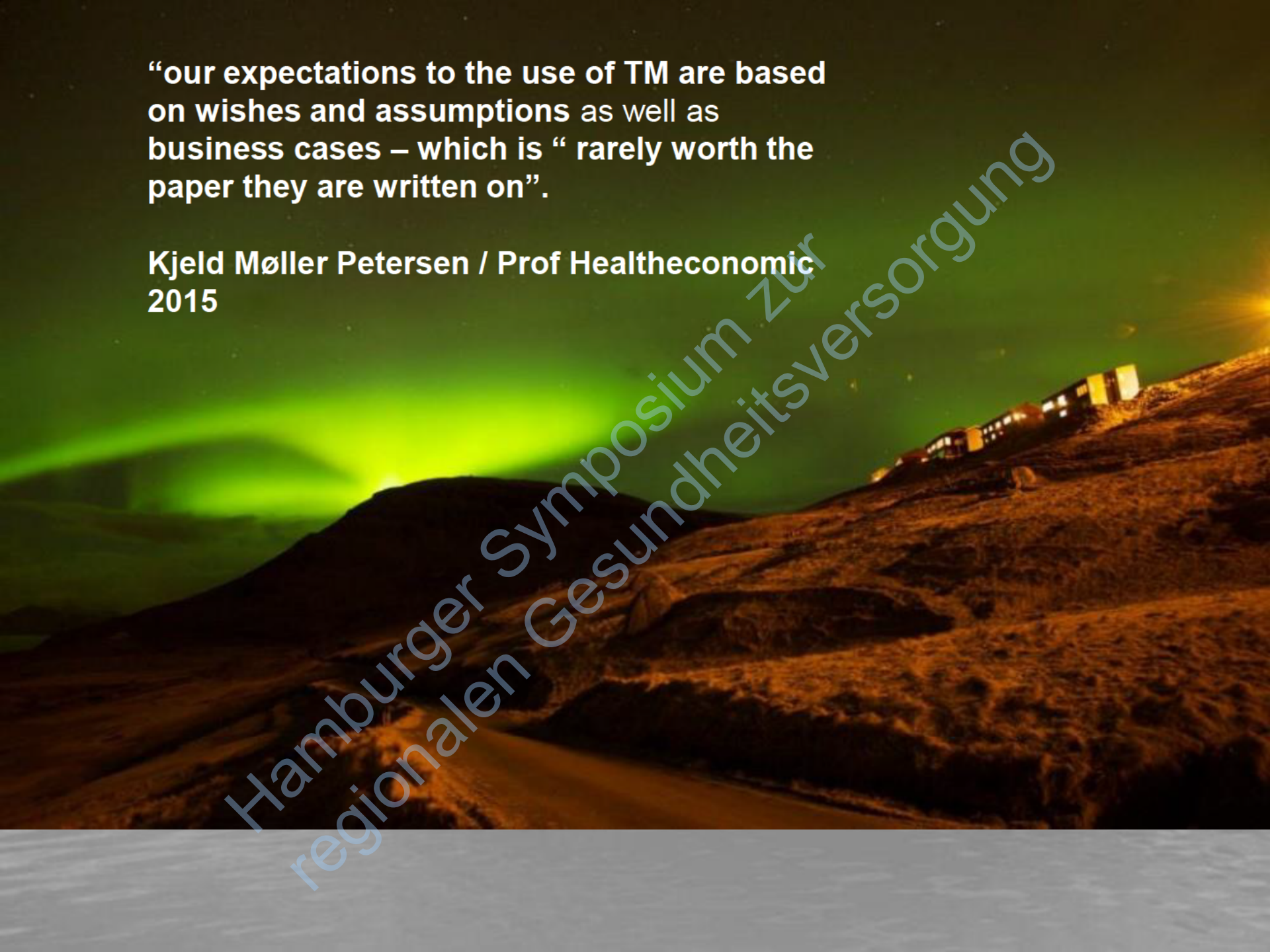
THE FUTURE OF DRONES

Here Come the Drones

"our expectations to the use of TM are based on wishes and assumptions as well as business cases – which is " rarely worth the paper they are written on".

Kjeld Møller Petersen / Prof Healtheconomic 2015

Teledermatology Faroe Islands
2003-2015

… if TD has to qualify as a trustful clinical tool - one has to consider a combined model – for the purpose

FINAL