

New Media in Medical Education:

Case based, interdisciplinary, blended learning

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Background and objectives

- To present my personal teachers perspective for radiologic and interdisciplinary case related medical education
- To present examples of local and international blended learning projects and to discuss their current status of development
- To discuss the relation of the individual teacher to the free internet, local institutions, national and international societies and public health corporations

Types of online resources:

- **Unspecified online resources** controlled by Individuals, companies, any kind of groups
- **Institutional online resources** controlled by
 - Departments
 - Universities
 - Specialised societies
 - National societies
 - Continental societies (ESR,RSNA,.....)
 - Primarily global societies (ISR, WikiMedia,WHO)



Rapidly growing

Examples of online resources, suitable to support case based eLearning:

- **Unspecified online resources**
 - **YOUR OWN CASES:** fresh or collected, they are the most effective connection to learners
- **Institutional online resources**
 - Radiopaedia: asynchronous wiki
 - EPOS: online poster collection
 - Eurorad: online classic case collection

Use of online resources in daily teaching: some suggestions

- **Institutional online resources**

- Radiopaedia: asynchronous wiki

- ESR Blog: asynchronous Blog

- EPOS: online poster collection

- Eurorad: online classic case collection

How do we learn radiology?	Radiology courses (best interactive)
	Interdisciplinary courses
	Routine
	Ward rounds
	Selfdirected learning

Use of online resources in daily teaching: some suggestions

– Radiopaedia: asynchronous wiki

– ESR Blog: asynchronous

– EPOS: online posters

– Eurorad: online classic case collection

Characteristics	Many short cases
Of	
Radiopaedia	Articles!!
	Suited for almost all types of courses

Use of online resources in daily teaching: some suggestions

– Radiopaedia: asynchronous wiki

– ESR Blog: asynchronous

– **EPOS**: online posters

– Eurorad: online classic case collection

Characteristics	Poster collection
Of	
EPOS	High level deep information And anatomy!, graphics
	Suited for teachers preparation & Asynchronous learning

Use of online resources in daily teaching: some suggestions

– Radiopaedia: asynchronous wiki

– ESR Blog: asynchronous

– EPOS: online posters

– **Eurorad**: online classic case collection

Characteristics	Scientific case collection
Of	
Eurorad	Can be used in a teaching mode
	Suited for deeper insights & Clinical reasoning of elder students

Creating a local case collection:

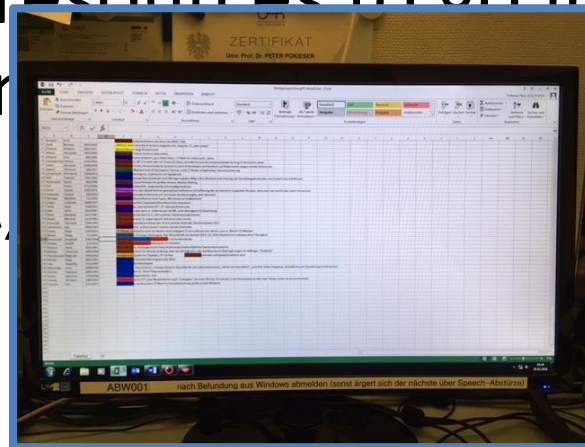
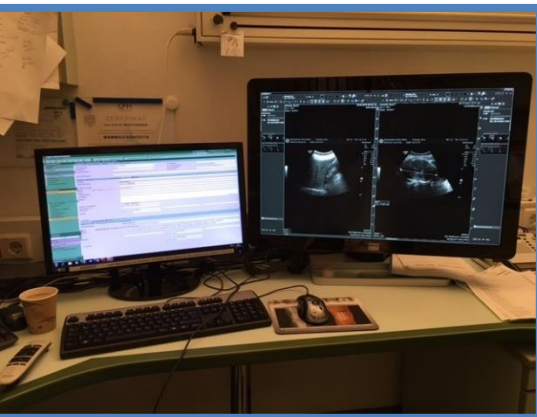
- A) To create my personal cases within my own storage; computer/cloud
- B) To create cases for a department/faculty
- C) To create cases to go for international interaction (individual, society, commercial)

Best way for creating your local case collection: how I do it

- A) To create my personal resources within my own storage; computer/cloud
- B) To create resources for a department/faculty
- C) To create resources to go for international interaction (individual, society, commercial)

Best way for creating your local case collection: how I do it

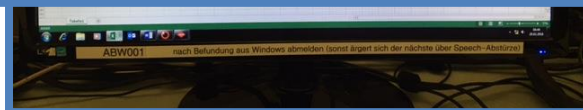
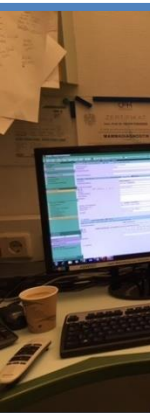
- A) To create my personal resources within my own storage; computer/cloud
- B) To create resources for a department/faculty



LWS, schöne Hohlkreuzdünsonstrix	
LWS, Spinalanalyse L5, supertypisch und sonst alles normal	
LWS, Facetenspondylolisthese von L4 mit schöner Stufe des Dornfortsatzes L4	
CT Nieren, UrothelCa nach als Rezidiv nach selbigem TU im re Ostium vor Jahr	
CTThorax Abd, Zirrhose, Hämangion, Stp. Milzinfarkt mit Verlauf 2014 - 16, 20	
RöHWS, tolle Karotisverkalkungen toll für Schlucklernende	
KnieRö, PopAneurysma?, Bakerzyste mit Verkalk?	
Navicularserie, Ellebogenrö mit Zielaufnahme des RadiusköpfchenTopnormal	
Rö Claviculafraktur im Verlauf, eindeutig, aber als Schrägfraktur des Schaftes d	CT-Hämangiomwirbel un
Parapelvine Zysten mit Topdoku, CT + Schall	
SonoAbd, die schönsten Hämangiome der Welt	
SonoAbd, tolle Leberlappen	
CT-Abdomen, Coecaltumor, + kleiner Polyp im Ascendens und Lebermetastas	
Virtueller Colon CT, 5mm Polyp ascendens	
CT Abdomen, Appendizitis, nett	
SonoVenen, keine TVT, aber Muskelläsion nach "Umkippen" vor einer Woche, S	
SonoAbd, Knu verifiziertem UT Myom in Voruntersuchung, große simple Milzzy	

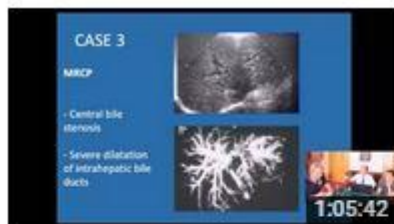
HWS, Superblockwirbel C2-4, LWS schönes Hohlkreuz und sonst nix
 LWS, Spondylolyse L5, supertypisch und sonst alles normal
 LWS, Pseudospondylolisthese von L4 mit schöner Stufe des Dornfortsatzes L4
 Niere, schöne SonoCT und ein kleines Knötchen
 CT Nieren, UrothelCa nach als Rezidiv nach selbigem TU im re Ostium vor Jahre
 CT Thorax Abd, Zirrhose, Hämangion, Stp. Milzinfarkt mit Verlauf 2014 - 16, 20
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 Parapelvine Zysten mit Topdolo... CT: ...
 Sono Abd, die schönsten Hämangio...
 Sono Abd Riedelleberlappen
 CT-Abdomen, Coecaltumor, + Metastas
 Virtueller Colon CT, 5mm Polyp
 CT Abdomen Appendizitis, net
 Sono Venen, keine TVT, aber Muskelläsion nach "Umkippen" vor einer Woche, S
 Sono Abd, KoU verifiziertem UT Myom in Voruntersuchung, große simple Milzzy:

- Directly during work
- One minute per case
- Easy editing
- ~ 5-10 cases per week



Example personal collection: Sonography of the abdomen

- Method: 2 Radiologists, 1 Student, 1 Chatmaster: Juli 2013
- Announcement only over the personal international Network
- 20 participants, 1h continuous interactive, strongly case related
- Recording, ad You tube, 06 72015; 9135 have seen on you tube, 01/2016 > 13000



Webinar: Radiology: Sonography of the abdomen

von University Publisher 3.0
vor 1 Jahr • 9.135 Aufrufe

Recording of the Webinar held on August 19th 2013 in the College of Physicians Vienna. Peter Pokieser (Medical University of ...

HD



Webinar: Radiology: Sonography of the abdomen II

von University Publisher 3.0
vor 1 Jahr • 3.432 Aufrufe

Recording of the Webinar held on September 23rd 2013 in the College of Physicians Vienna. For the second time Peter Pokieser ...

HD



Webinar: Radiology: Radiology of the upper gastrointestinal tract

von University Publisher 3.0
vor 1 Jahr • 1.135 Aufrufe

Recording of the Webinar held on October 21st 2013 in the College of Physicians Vienna. Peter Pokieser (Medical University of ...

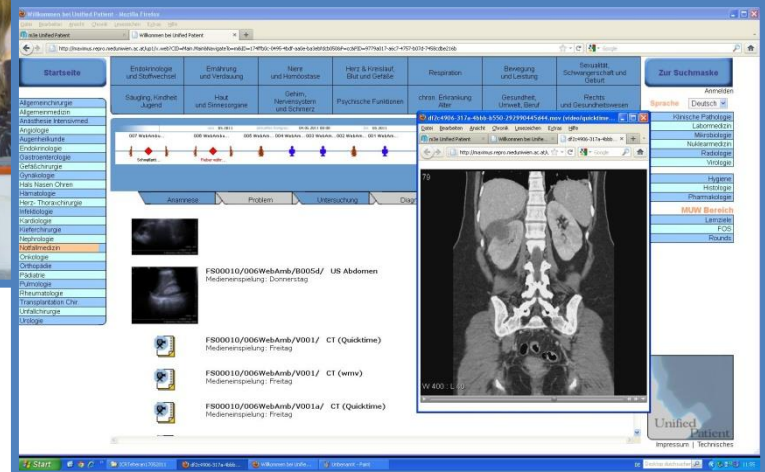
HD

Best way for creating a local case collection: how **we** do it

- A) To create my personal resources within my own storage; computer/cloud
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EXAMPLE: WebAmbulance Emergency

Interdisciplinary emergency cases: 500 students, weekly, blended learning, peer assisted, classical Web 2.0 design



Template and action plan „double forum“, „Peer teaching“

- ▶ Home
- ▶ For students
- ▶ For teachers
- ▶ About us
- ▶ Specials

Laufende Falldiskussionen 5. Studienjahr 2010/11

07. Falldiskussion "Notfalldiagnostik, 5. Studienjahr - 2011, Sommersemester"

Status

Diskussion im Laufen ab 11.05.2011

Lehrveranstaltung Details

LV-Leiter Hans Domanovits (Notfallmedizin), Giora Meron (Notfallmedizin), Markus Withalm (Student), Thomas Moritz (Radiologie), Peter F (Radiologie),

Semester 09/10, Diagnostic Round: 007 Webambulanz

Info zur LV Webambulanz mit neuer Falldiskussion

Diskussionsaufruf

Einladung zur Falldiskussion "Schwallartiges Erbrechen", der Start erfolgt am 11.05.2011 um 13h30 im Hörsaal 1, Hörsaalzentrum

Zeitplan

Start	11.05.2011, 13h30
Review 1	12.05.2011
Review 2	13.05.2011
Review 3	17.05.2011
Ende	18.05.2011, 13h30

[Zur Falldiskussion >>](#)

[WebAmbulanz Emergency
WS2010/11 - SS2011](#)

Language

English

Search

- [zu den abgeschlossenen Falldiskussionen im 5. Studienjahr 2011 - Sommersemester](#)
- [zu den abgeschlossenen Falldiskussionen im 5. Studienjahr 2010/11 - Wintersemester](#)

Multimedia electronic health record: nonadministrative, pandisciplinary, simultaneous export

The screenshot displays a web-based medical record system. At the top, a navigation bar includes a 'Startseite' button and a grid of medical specialties such as 'Endokrinologie und Stoffwechsel', 'Ernährung und Verdauung', 'Niere und Homöostase', 'Herz & Kreislauf, Blut und Gefäße', 'Respiration', 'Bewegung und Leistung', and 'Sexualität, Schwangerschaft und Geburt'. A sidebar on the left lists various medical disciplines, with 'Notfallmedizin' highlighted. The main content area features a timeline of events from May 2011, with markers for 'Schwalleri...' and 'Fieberwähr...'. Below the timeline, there are three video entries for CT scans of the abdomen, each with a thumbnail and a description: 'FS00010/006WebAmb/B005d/ US Abdomen', 'FS00010/006WebAmb/V001/ CT (Quicktime)', and 'FS00010/006WebAmb/V001a/ CT (Quicktime)'. A video player window is open, showing a coronal CT scan of the abdomen with the text '79' and 'W 400 : L 40'. The bottom of the screen shows the Windows taskbar with the Start button and several open applications, including 'ICRTeheran17052011', 'df2c4906-317a-4bbb...', 'Willkommen bei Unifie...', and 'Unbenannt - Paint'.

Interdisciplinary Moderation

Willkommen bei Unified Patient - Mozilla Firefox

m3e Unified Patient | Willkommen bei Unified Patient

http://maximus.repro.meduniwien.ac.at/up1/x.web?CID=Main.Main&NavigateTo=mi&ID=174ffb0c-0495-4bdf-aa0e-ba3ebfdbc050&P=cc&PID=9779a017-a6c7-4757-b07d-7458cde216b

Startseite	Endokrinologie und Stoffwechsel	Ernährung und Verdauung	Niere und Homöostase	Herz & Kreislauf, Blut und Gefäße	Respiration	Bewegung und Leistung	Sexualität, Schwangerschaft und Geburt
	Säugling, Kindheit Jugend	Haut und Sinnesorgane	Gehirn, Nervensystem und Schmerz	Psychische Funktionen	chron. Erkrankung Alter	Gesundheit, Umwelt, Beruf	Rechts und Gesundheitswesen

Zur Suchmaske

Anmelden

Langue Deutsch

- Klinische Pathologie
- Labormedizin
- Mikrobiologie
- Nuklearmedizin
- Radiologie
- Virologie

- Hygiene
- Histologie
- Pharmakologie

MUW Bereich

- Lernziele
- FOS
- Rounds

007 WebAmbu... 006 WebAm... 005 WebAm... 004 WebAm... 003 WebAm... 002 WebAm... 001 WebAm...

Schweatarti...

Anamnese | Problem | Untersuchung | Diagnose | Therapie | Ergebnis

C/P-Bild sind neu aufgetretene Verschattungen, vorallem rechts basal zu erkennen. Es könnte sich hierbei um ein toxisches Lungenödem handeln. Somit sind u.a. Herz, Leber, Pankreas, Niere, Lunge betroffen, es scheint sich ein Multiorganproblem/versagen abzuzeichnen. Die Patientin scheint dem C/P-Bild nach intensivpflichtig geworden zu sein.

Diskussionsleiter DOM/MER [Anmelden](#)

Diskussionsleiter Notfallmedizin: H. Domanovits / G. Meron hdoman84, 16.05.2011 15:44

Bei EKG 1 und 2 besteht als Grundrhythmus leicht tachykardes Vorhofflimmern, man findet Zeichen einer peripheren Niedervoltage, unspezifische ST-T Senkungen und ausgeprägte U Wellen in V2-4, der QRS Komplex ist nicht verbreitert, im EKG 3 dann Vorhofflattern mit wechselnder Überleitung, die Flatterwellen in V1 sichtbar, die Repolarisationsstörung weitgehend zurückgebildet, spricht also gegen Digitalisintoxikation.

Die Angehörigen der Patientin haben aufgrund von Resten die Herbstzeitlose als Ursache, somit eine Colchizinvergiftung, verifiziert.

Wie schon andiskutiert ist mit einem foudroyantem Verlauf zu rechnen. Sehr rasch kam es zu einer Verschlechterung und Intensivpflichtigkeit der Patientin.

aktuelle MEDIENEINSPIELUNG: Labor 3 [Anmelden](#)

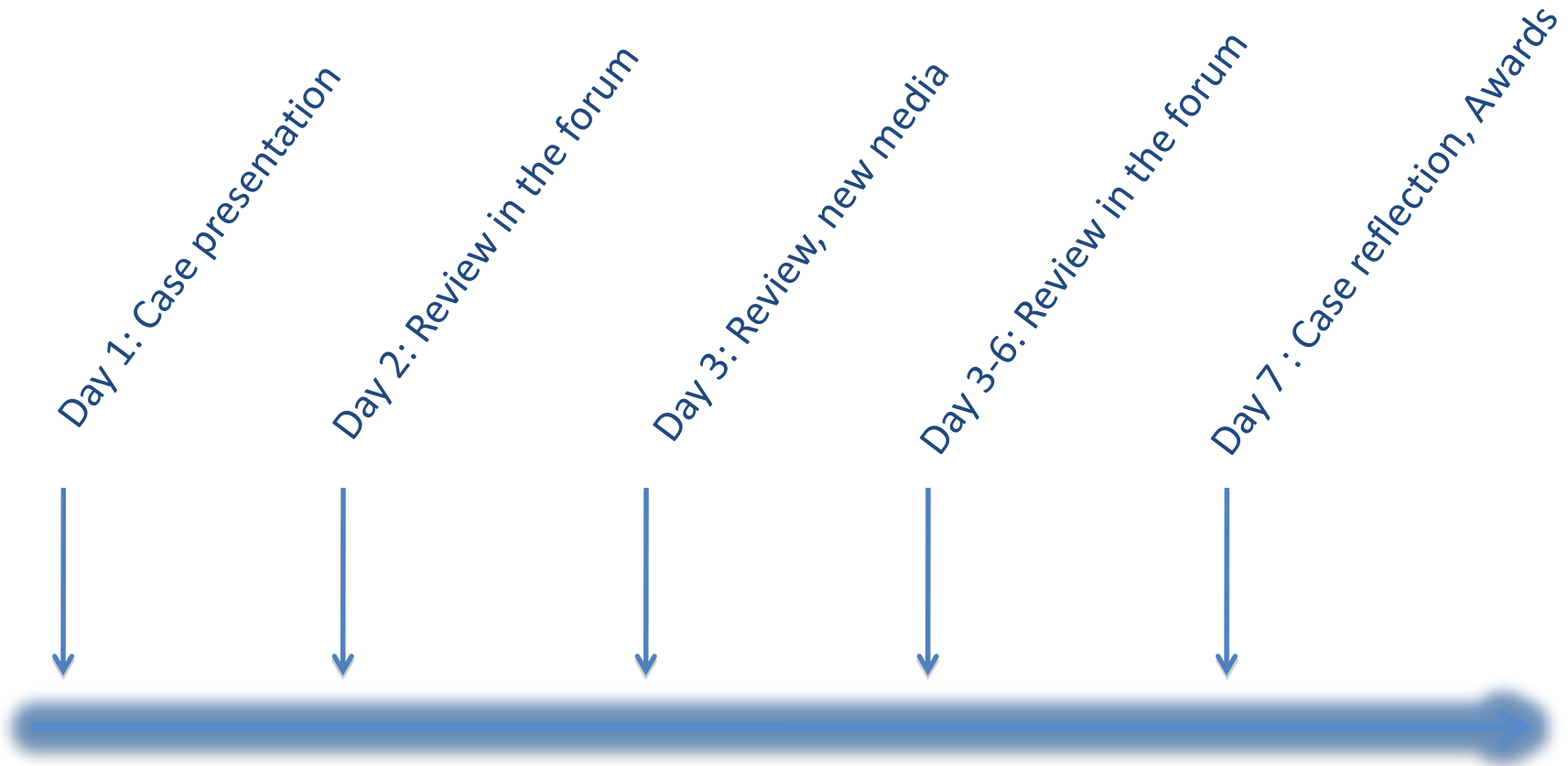
Koordination WebAmbulanz: E. Simek esimek68, 17.05.2011 08:31

Ihre Meinung zu diesem Thema [Anmelden](#)

Unified Patient

Impressum | Technisches

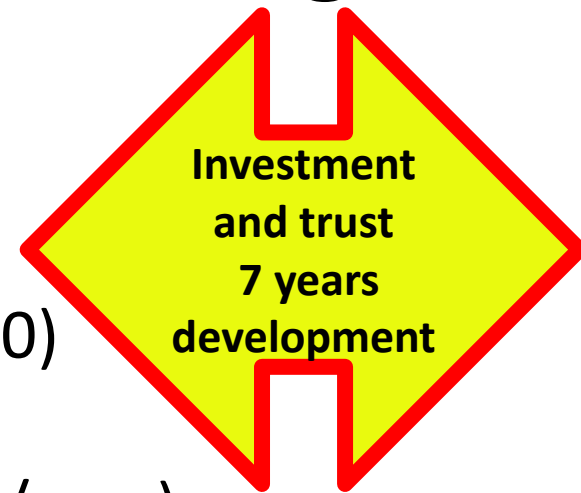
Webambulance: weekly schedule



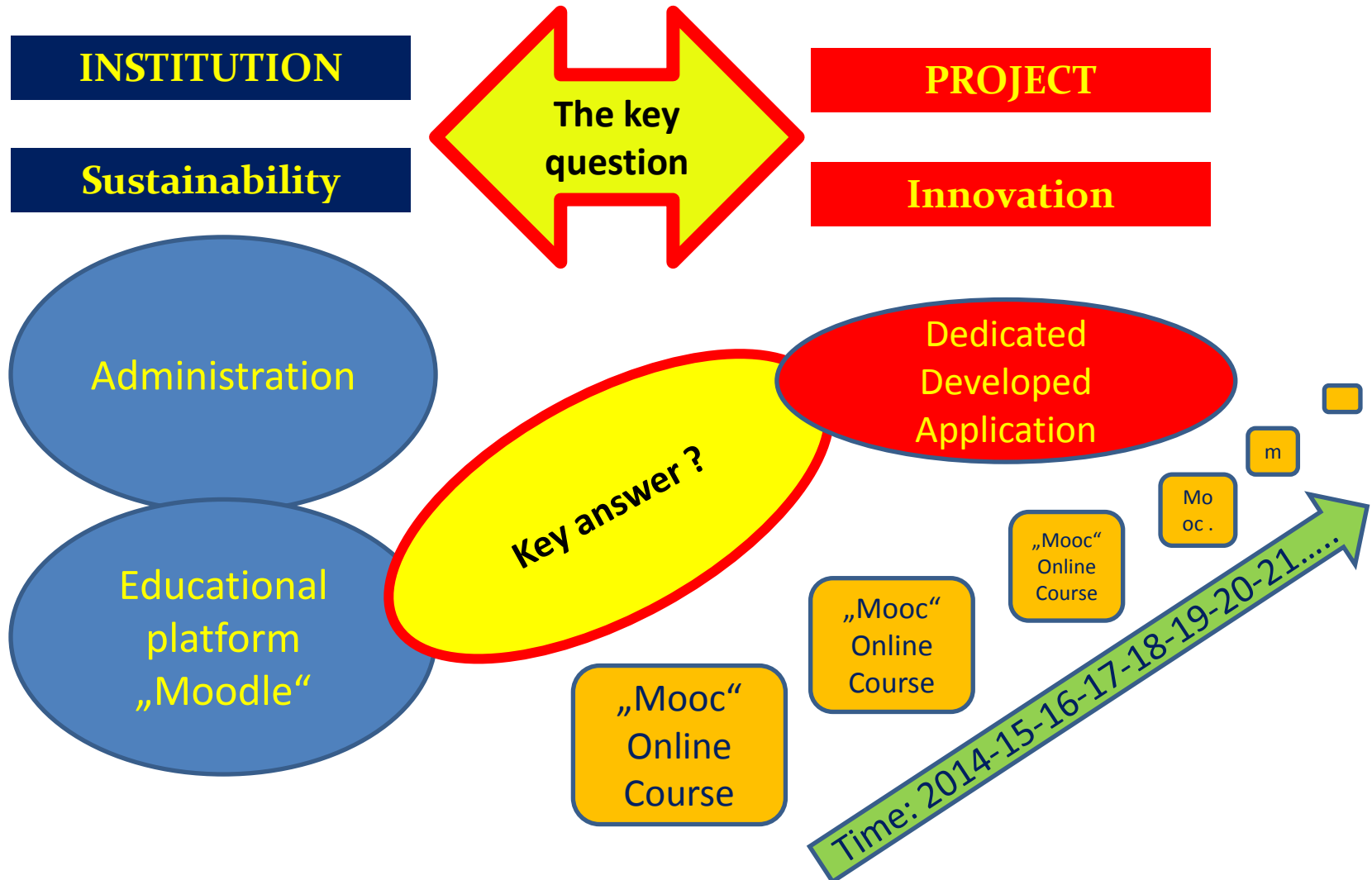
Institutional eLearning: challenges

„Webambulances“: Continuous challenges

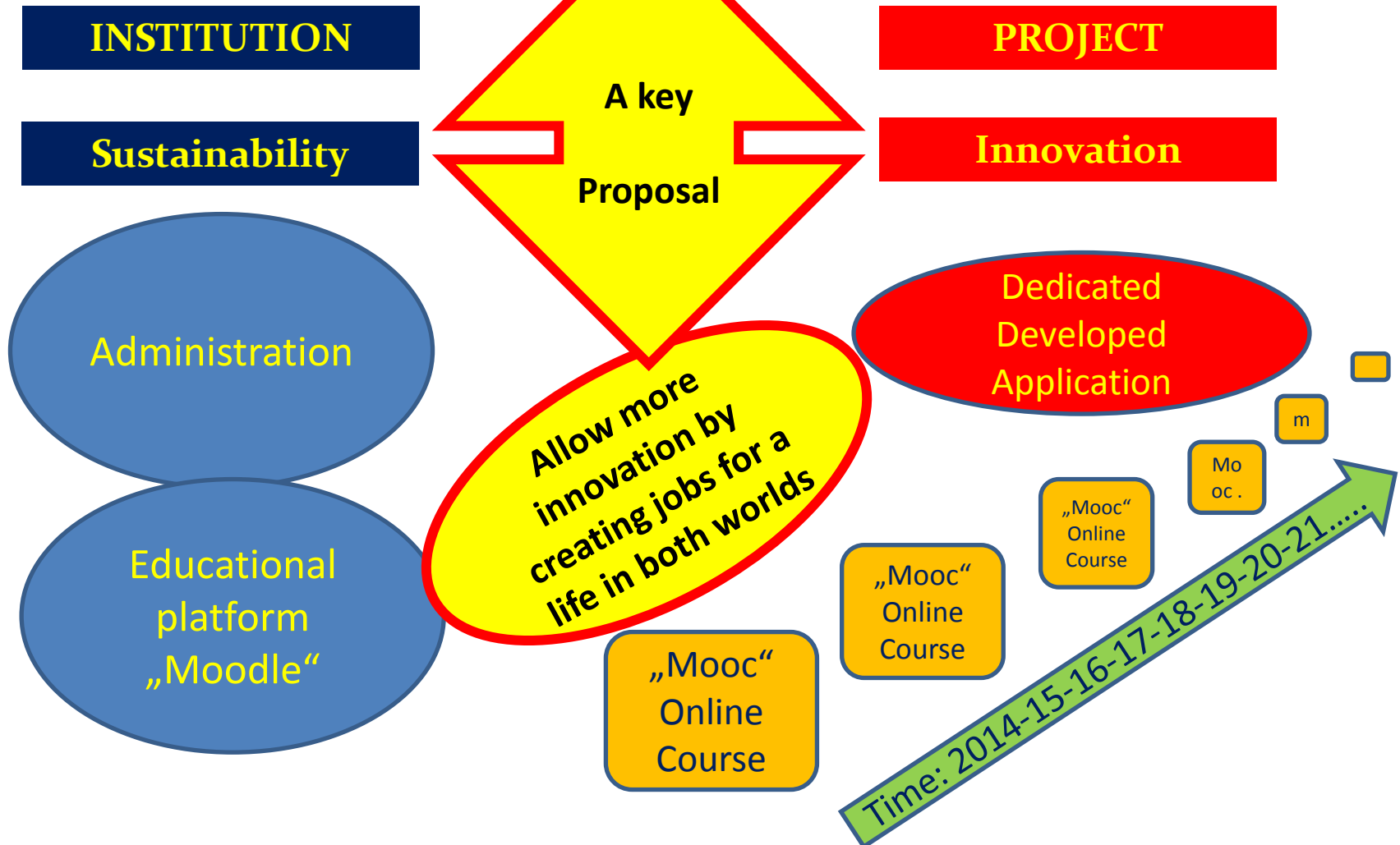
- 2002 granted by Meduniwien (€ 300000)
- 2002 – 2014: continuous trials (€ 20000/year)
- 2007 - 2014: Webambulances officially integrated into undergraduate curriculum
- 2008 – 2016: Webambulance model for the OESO foundation



Institutional social media: Components of informatic integration



Institutional social media: Components of informatic integration



Best way for creating local e-learning resources: how we do it

- A) To create my personal resources within my own storage; computer/cloud
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European Society for Swallowing Disorders

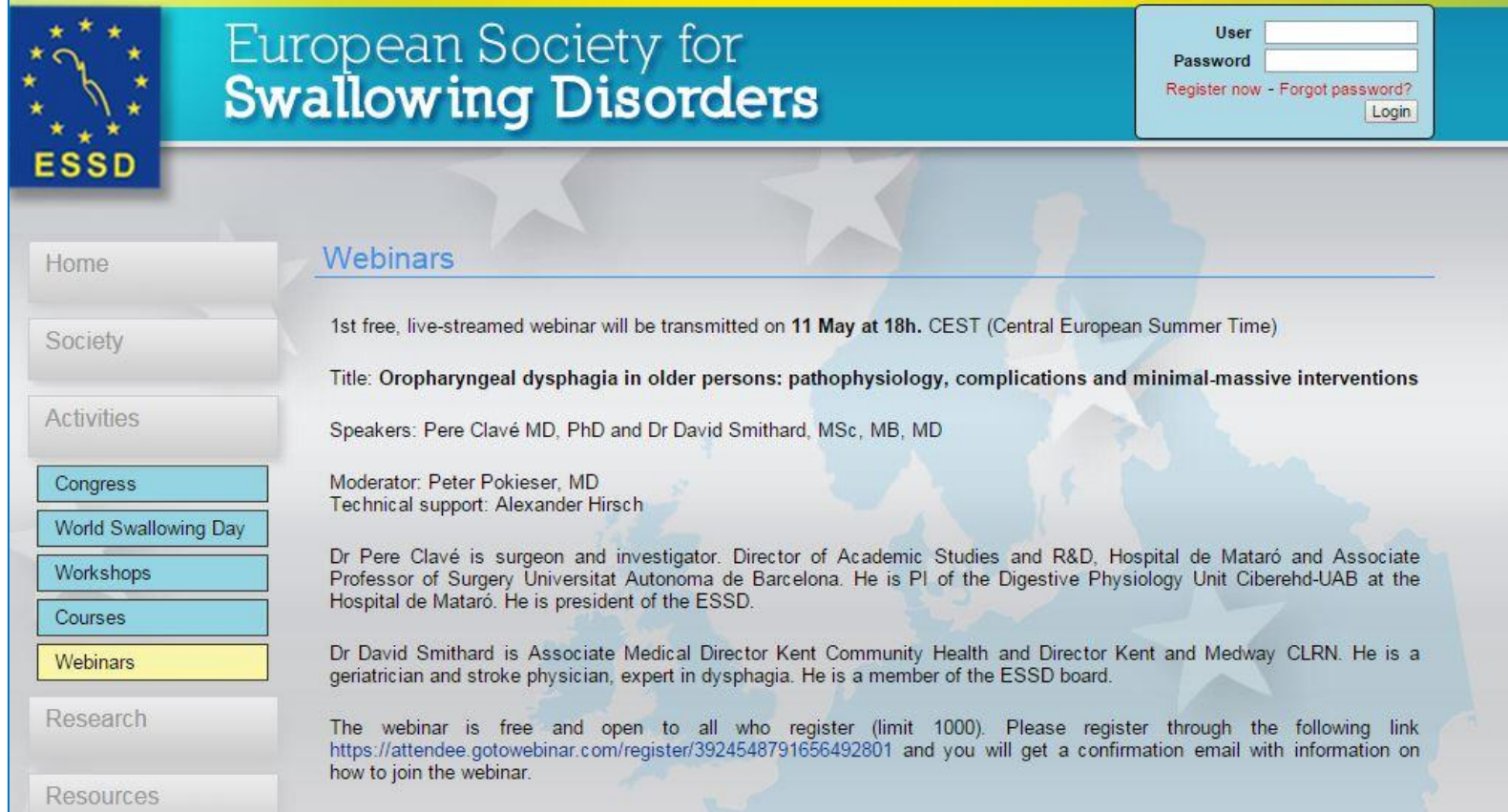
webinars & webambulances 2016

- International elearning activity
- Educational model requiring continuous development, based on evidence

Peter Pokieser, Evelin Gschosmann,
Alexander Hirsch, Michaela Wagner Menghin
DEMAW

Beispiel 4: Swallowing disorders

- European Society for Swallowing disorders
- Interdisciplinary Society
- 05 2015 first Webinar, 1h, Quiz cases, 2 lectures, MCQ, 60 participants, Chat 1h



The screenshot shows the website for the European Society for Swallowing Disorders (ESSD). The header features the ESSD logo on the left, which includes a stylized swallow and the acronym 'ESSD'. To the right of the logo is the text 'European Society for Swallowing Disorders'. Further right is a login box with fields for 'User' and 'Password', a 'Login' button, and links for 'Register now' and 'Forgot password?'. Below the header is a navigation menu with buttons for 'Home', 'Society', 'Activities', 'Congress', 'World Swallowing Day', 'Workshops', 'Courses', 'Webinars' (highlighted in yellow), 'Research', and 'Resources'. The main content area is titled 'Webinars' and contains the following text:

1st free, live-streamed webinar will be transmitted on **11 May at 18h**. CEST (Central European Summer Time)

Title: **Oropharyngeal dysphagia in older persons: pathophysiology, complications and minimal-massive interventions**

Speakers: Pere Clavé MD, PhD and Dr David Smithard, MSc, MB, MD

Moderator: Peter Pokieser, MD
Technical support: Alexander Hirsch

Dr Pere Clavé is surgeon and investigator. Director of Academic Studies and R&D, Hospital de Mataró and Associate Professor of Surgery Universitat Autònoma de Barcelona. He is PI of the Digestive Physiology Unit Ciberehd-UAB at the Hospital de Mataró. He is president of the ESSD.

Dr David Smithard is Associate Medical Director Kent Community Health and Director Kent and Medway CLRN. He is a geriatrician and stroke physician, expert in dysphagia. He is a member of the ESSD board.

The webinar is free and open to all who register (limit 1000). Please register through the following link <https://attendee.gotowebinar.com/register/3924548791656492801> and you will get a confirmation email with information on how to join the webinar.

Clinical case discussions and live webinars:

- ✓ Webinars are already stored and accessible for members,
- ✓ All case discussions and live webinars are free for the international medical community to join interactively

User

Password


[Register now - Forgot password?](#)

David Smithard, Presbyphagia

 **David G. Smithard, Presbyphagia** BARCELONA SPAIN 

from Jane Lewis PLUS

Dr David Smithard, London
BSc, MD, FRCP
Presbyphagia



15:44



Clinical Frailty Scale®


1. Very Fit - People who are robust, active, energetic and independent. These people commonly exercise regularly. They are among the fittest for their age.
2. Fit - People who have no acute illness symptoms but are less fit than category 1. They may exercise or do not exercise occasionally, eg occasionally.
3. Planning Frail - People whose medical problems are well controlled, but are not regularly active.
4. Vulnerable - Vulnerable depends on others for help with other operations than problems. Commonly dependent on young relatives or carers living and working close by.
5. Mildly Frail - These people often have acute illness, falling, and need help in high order ADLs (bathing, dressing, toileting, transferring, walking, eating, drinking, and health, psychological, cognitive, financial and social problems). They may have problems with some instrumental activities of daily living.
6. Moderately Frail - People who may need help with walking and high order instrumental activities of daily living.
7. Severely Frail - Completely dependent for personal care from someone (aged 18 years or younger). From so they cannot walk and/or sit up at all without help from a carer.
8. Very Severely Frail - Completely dependent for personal care from someone (aged 18 years or younger) and need professional assistance that is not available.
9. Terminally Ill - Approaching the end of life. The caregiver needs to plan with a life expectancy of less than 6 months and will not perform activities that are necessary for people with dementia.

The degree of frailty is dependent on the degree of autonomy. Commonly dependent on able-bodied carers supports the frailty score. People who are frail will need help with walking, eating, drinking, and health, psychological, cognitive, financial and social problems. They may have problems with some instrumental activities of daily living.

Screening, Assessment and Diagnosis


An Academic Health Sciences Centre for London Promoting better health for all

Pere Clavé, Oropharyngeal dysphagia

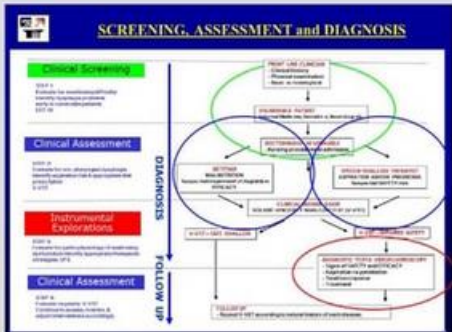
 **Pere Clavé, Oropharyngeal dysphagia** DELOMIA IN

from Jane Lewis PLUS

Pere Clavé MD, PhD
ESSD President, Spain
Oropharyngeal Dysphagia in the Elderly.



24:04



SCREENING, ASSESSMENT and DIAGNOSIS

Clinical Screening

Clinical Assessment

Instrumental Examinations

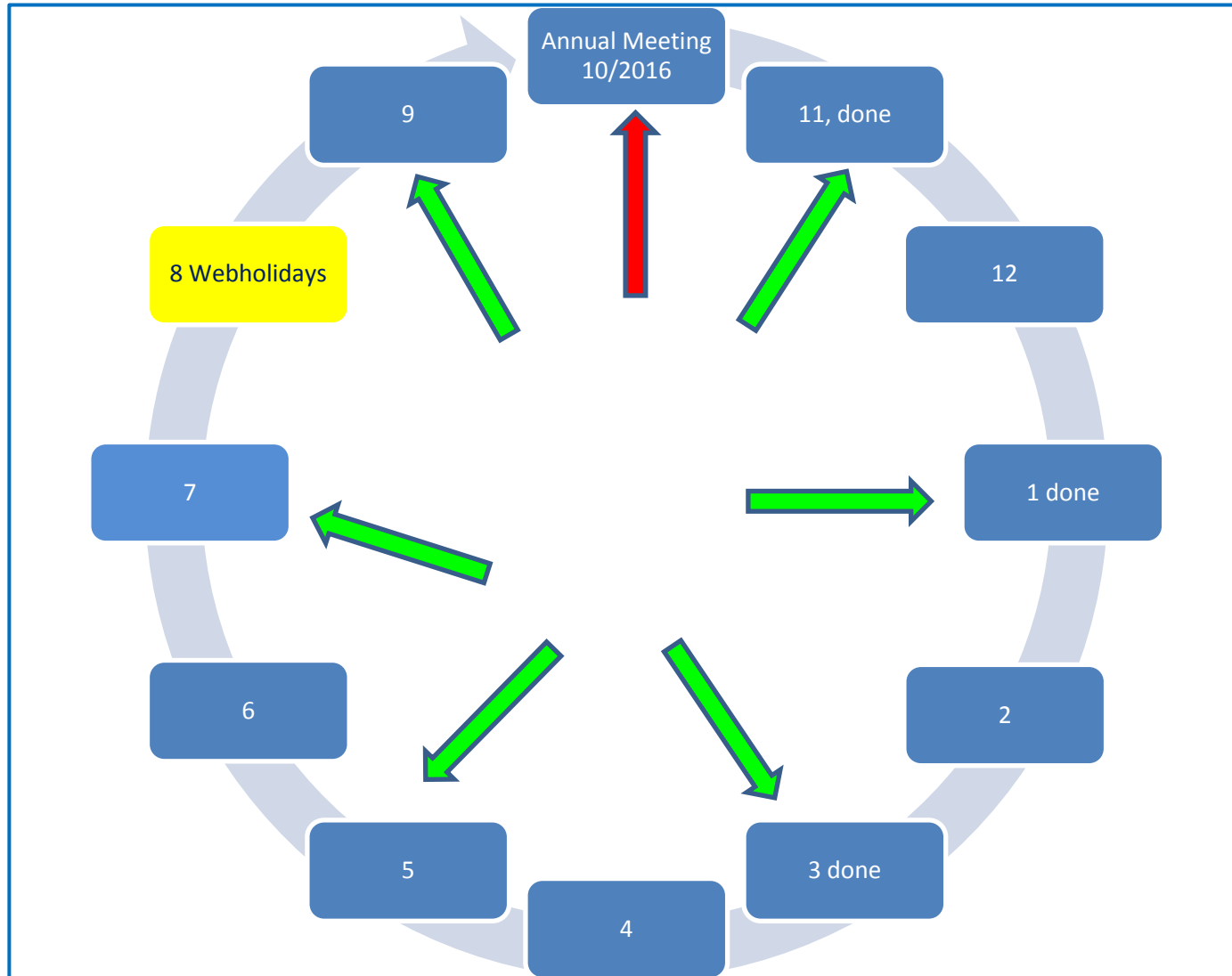
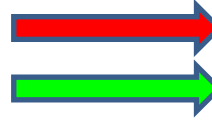
Clinical Assessment

DIAGNOSIS

4th MOTD

European Society for Swallowing disorders ab 10/2015

- Congress, lecture + webinar
- Online case discussion + webinar



Web 2.0 & global, interdisciplinary

www.oeso.org

o(es)O
foundation

Clinical
Case
discussions

- World Society on esophageal diseases:
- Bimonthly cases
- Interdisciplinary participants
- A blend of:
 - Board
 - eLearning
 - Wissenschaft

The screenshot displays the 'MyOESO' web application interface. At the top, there are navigation tabs for 'Statistics', 'Sequential Implementation', and 'Contacts'. The main header includes the 'o(es)O Knowledge' logo, 'Clinical Case discussions', and a collaboration logo for 'MEDICAL UNIVERSITY OF VIENNA'. The user's name 'peter.pokleser@meduniwien.ac.at' is visible in the top right corner. The main content area shows a case titled 'o(es)O case 01' with a timeline from 01.01.2000 to 01.01.2000. Below the timeline, there are tabs for 'Medical history', 'Problem', 'Examination', 'Diagnosis', 'Therapy', and 'Result'. The 'Medical history' section is expanded, showing a 'Medical history general' entry for '01.01.2000 00:00' with the text: '80yrs old woman referred to the emergency department for acute jaundice without abdominal pain, no fever. To rule out the hypothesis of a cancer of the pancreatic head, the patient underwent ultrasound of the abdomen and endoscopic ultrasound: A T4 tumor with invasion of the portal vein was found.' Below this, the 'Problem' section is also expanded, showing a '1. Symptom' entry for '01.01.2000 00:00' with a 'Description' that reads: 'At the end of the endoscopic ultrasound a perforation of the proximal duodenum was discovered. An attempt of treatment with clips was performed without success (Fig. 1). Retrieving the endoscope, a large iatrogenic defect of the posterior cervical esophagus was detected (Fig. 2).' A small image labeled 'Fig. 1 Endoscopic attempt of treatment with clips' is shown at the bottom of the description.

Web 2.0 & global, interdisciplinary

in cooperation with

International Agency for Research on Cancer

 **World Health Organization**

 **UNESCO**
United Nations
Educational, Scientific and
Cultural Organization

and Major Cancer Centers in the World

o(es)so
the esophagus

**12th World Conference
Cancers of the Esophagus
Paris, August 27-30, 2013**
UNESCO Headquarters

 **o(es)so**
foundation

**Clinical
Case
discussions**

An inter-disciplinary
approach
to a disease.

Conclusion:

- Free online resources have to be integrated pertinent to their strength
- Your cases and your experience are exactly the treasure, what students never will find in the internet – the basis for your teaching
- local and global elearning are converging

Thank you for your attention !



Elba 08 2014