

# Assessing health technologies through the HTA approach:

Case study on early identification and timely treatment of pain patients



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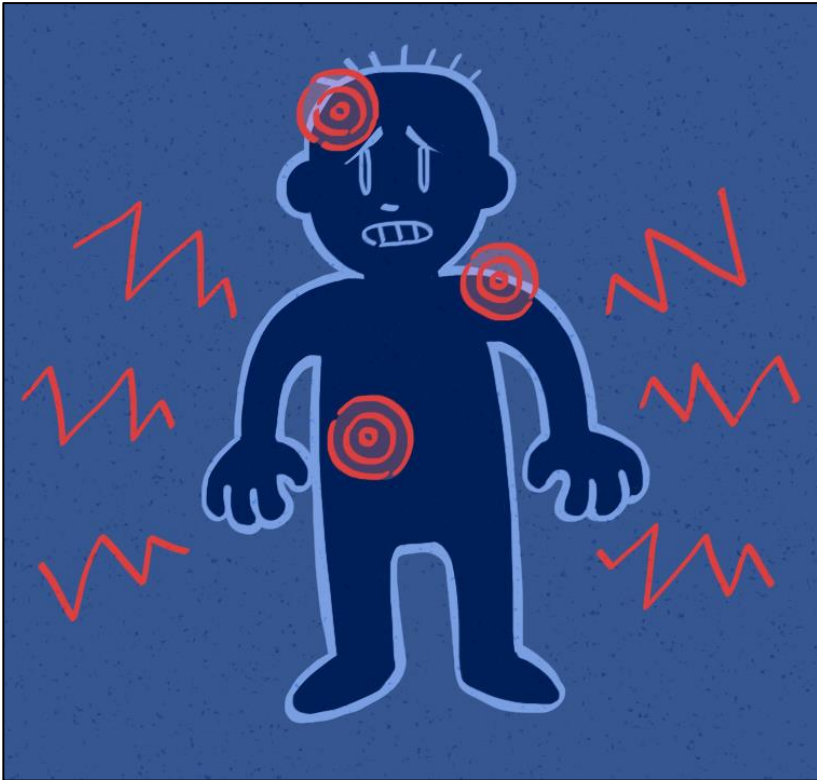
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## Outline

- **Introduction to the case**
- **Discussion:** Two questions on how the specific health problem in the case can be addressed in an HTA perspective?
  - From policy question to research question and methods used
  - Human resources
- **Relevant stakeholders and appropriate stakeholder involvement**
- **Main conclusions and perspectives**
- **Use of results from the HTA in policy, practice and research?**

## Introduction to the case



### What?

- An HTA on Early Identification and Timely Treatment for Pain Patients

### When?

- 2014

### Who?

- DEFACTUM, for Danish Region who is the interest organisation for the five regions in Denmark

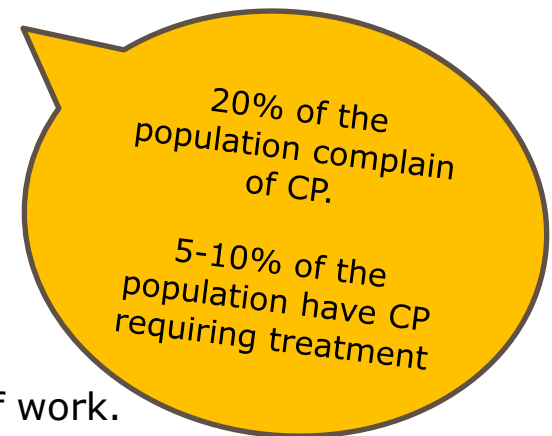
## Introduction - health problem

**Definition:** Chronic pain (CP) is defined as pain that has persisted beyond the normal tissue healing time (>3 months).

Musculoskeletal	Neuropathic	Headaches	Other
<ul style="list-style-type: none"> <li>-Back pain</li> <li>-Arthritis</li> <li>-Temporomandibular pain</li> <li>-Fibromyalgia</li> <li>-Myofacial pain</li> </ul>	<ul style="list-style-type: none"> <li>-Herpes Zoster/post-herpetic neuralgia</li> <li>-Phantom limb pain</li> <li>-Diabetic neuropathy</li> <li>-Carpal tunnel syndrome</li> <li>-Complex regional pain syndromr</li> </ul>	<ul style="list-style-type: none"> <li>-Migraine</li> <li>-Tension</li> <li>-Cluster</li> </ul>	<ul style="list-style-type: none"> <li>-Irritable bowel syndrome</li> <li>-Haemophilia</li> <li>-Sickle cell anemia</li> </ul>

### Burden of disease:

- Increased health care costs
- increased disability and mortality
- Increased premature retirement from work, and days off work.



## **Introduction - current management of (chronic) pain**

### **Characteristics:**

- Performed in all health specialities and across all sectors.
- Mostly managed by the local GP.
- Few patients are referred to treatment at specialised multidisciplinary pain clinics.

### **Limitations:**

- Diagnostic processes dependent on the individual GP
- Prolonged diagnostic procedures
- Long waiting times for specialised treatment
- Lack of national clinical guidelines.

### **Consequences:**

- Some pain patients receive unnecessary treatment while others don't get the treatment they need at the right time in the process.

## Introduction - solution to current mangement limitations?

### Hypothesis

Early identification and timely treatment of pain patients can improve outcome and reduce cost in patients at high risk of developing a chronic pain condition.



***"The right treatment  
for the right patient  
at the right time"***

## Aim of the HTA

To elucidate how the management and organisation of health services can be developed to ensure early identification of and timely treatment for patients with pain.



Aarhus Town Hall

## Challenges



Aarhus cathedral

### **Patient (study population):**

- Not limited to one diagnosis.

### **Intervention (Tecnology):**

- The 'technology' is a clinical pathway.

### **Comparison:**

- Managed in all health specialities and across sectors.
- Organisation and treatment vary across the five regions in Denmark.



## How can this specific health problem be addressed in an HTA perspective?



Aarhus centre

## How can the policy question be translated into research questions and what methods should be used?

### Policy question:

*Can early identification and timely treatment of pain patients improve outcome and reduce cost in patients at high risk of developing a chronic pain condition compared with usual practice?*

Patient	Intervention	Comparator	Outcome
Adults (> 18 years) with a subacute non-malignant pain condition	Early identification and timely treatment of high risk patients	Usual practice	<ul style="list-style-type: none"><li>- Disability</li><li>- Sick-leave</li><li>- Cost</li></ul>

### Domains (selected):

- Clinical Effectiveness
- Costs and economic evaluation
- Organisational aspects

## Research questions - examples

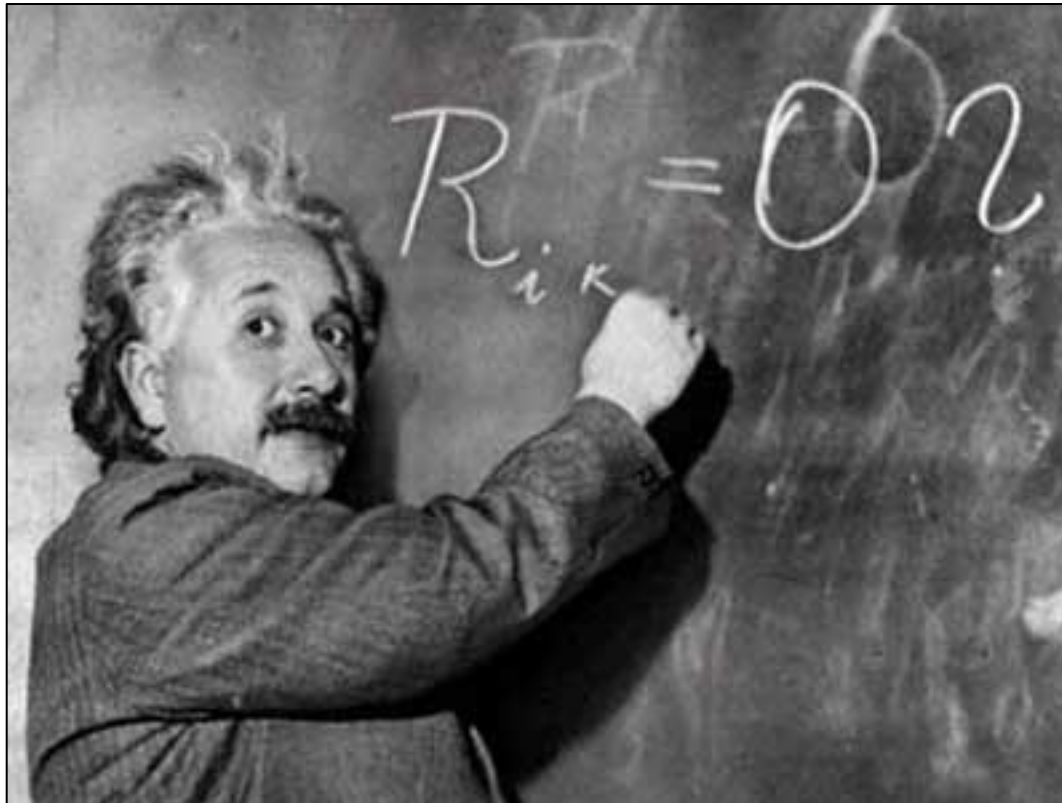
Domain	Research question
Clinical Effectiveness	Can early identification of and timely treatment for adults with subacute non-malignant pain reduce disability and time of work for patients at high risk of developing a chronic pain condition compared with usual practice?
Organisational aspects	How is the current treatment for patients with a pain condition organised?
	Which models can be identified nationally and internationally for future organisation of early intervention for patients with pain?
Costs and economic evaluation	What are the expected economic consequences for society of implementation of a strategy to manage patients with subacute pain in Denmark?

## Which methods were used for answering the research questions?

Domain	Methods
Clinical Effectiveness	Systematic review with meta-analysis using the GRADE approach
Organisational aspects	Systematic review. Survey of key health professional actors involved in efforts to pain patients. Use of theoretical organisational models to guide the analysis.
Costs and economic evaluation	Systematic review of health economic studies



## What kind of human resources are required for conducting this HTA?



## **What kind of human resources were involved in conducting this HTA?**

### **Skills:**

- Clinical epidemiology, evidence-based medicine, clinical trials, meta-analysis, organisational research, health economic evaluations, policy making, and others.

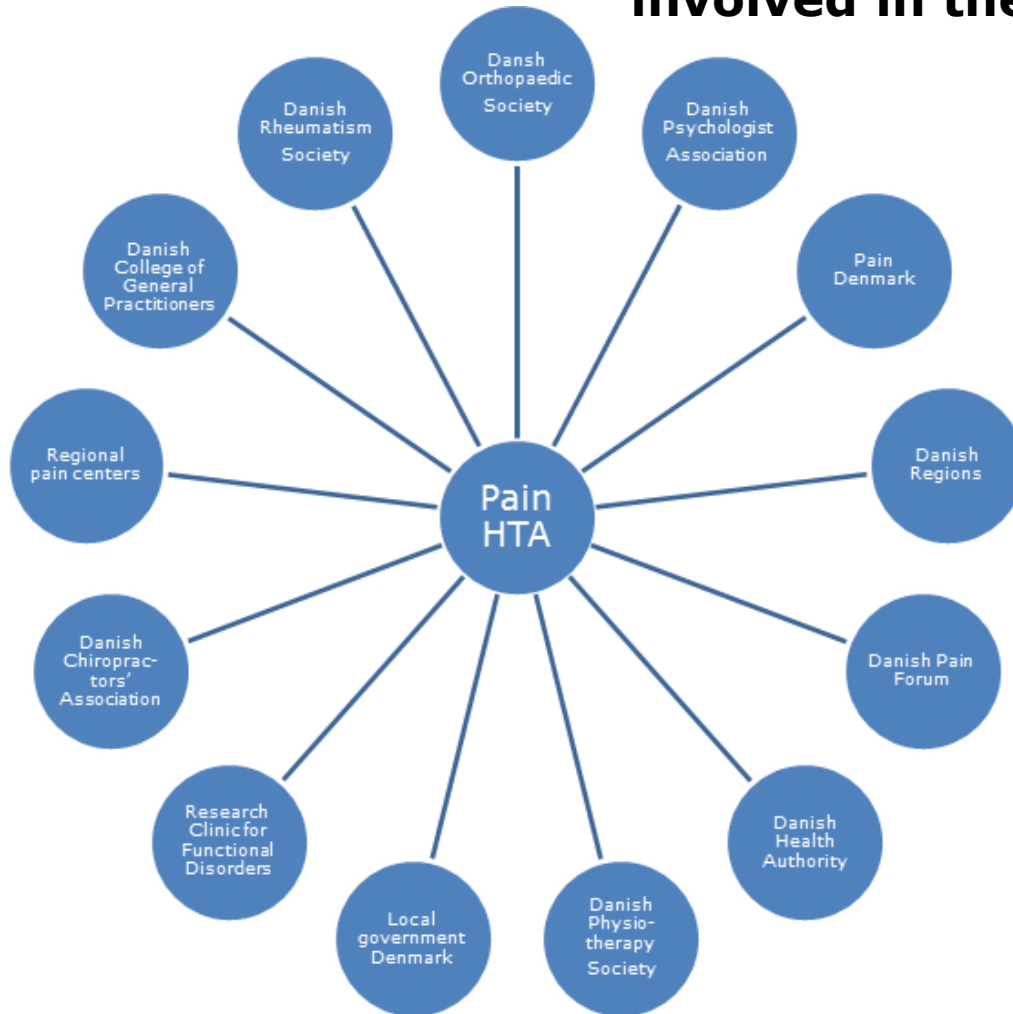
### **Tasks:**

- Litterature searches, assessing quality of evidence (GRADE), synthesising evidence (qualitative and quantitative (meta-analysis) analysis), primary data collection, organisational analysis, writing the report and dissemination of the results.

### **Professional background:**

- Health services researchers specialised in organisation analysis, biostatistician, health economist, information specialist, GP, pain researchers, physiotherapist and representative from patient organisation.

## Who were the relevant stakeholders and how were they involved in the proces?



- Pain centers
- Patient organisation
- Professional associations
- National and regional authorities



## Main conclusions and perspectives

### Prognostic factors:

- Multiple site pain
- High pain severity
- Older age
- Baseline disability
- Longer pain duration



Stratified treatment based on risk



## How can the results from this HTA be applied?

- **Policy**

- Priority-setting: to what extent should the capacity at the specialised pain centres be enhanced to meet the demand for timely treatment of patients with high risk of developing long term disability and sick-leave

- **Clinical practice**

- How can patient pathways be improved e.g.?:
  - increased knowledge of risk factors that should lead to referral to specialised treatment among GPs
  - development of national multidisciplinary guidelines

- **Research**

- More research into risk factors for development of chronic pain needed
- More research into effects of organisational strategies needed

## Thank you for your attention



Aarhus City library "Dokk1"