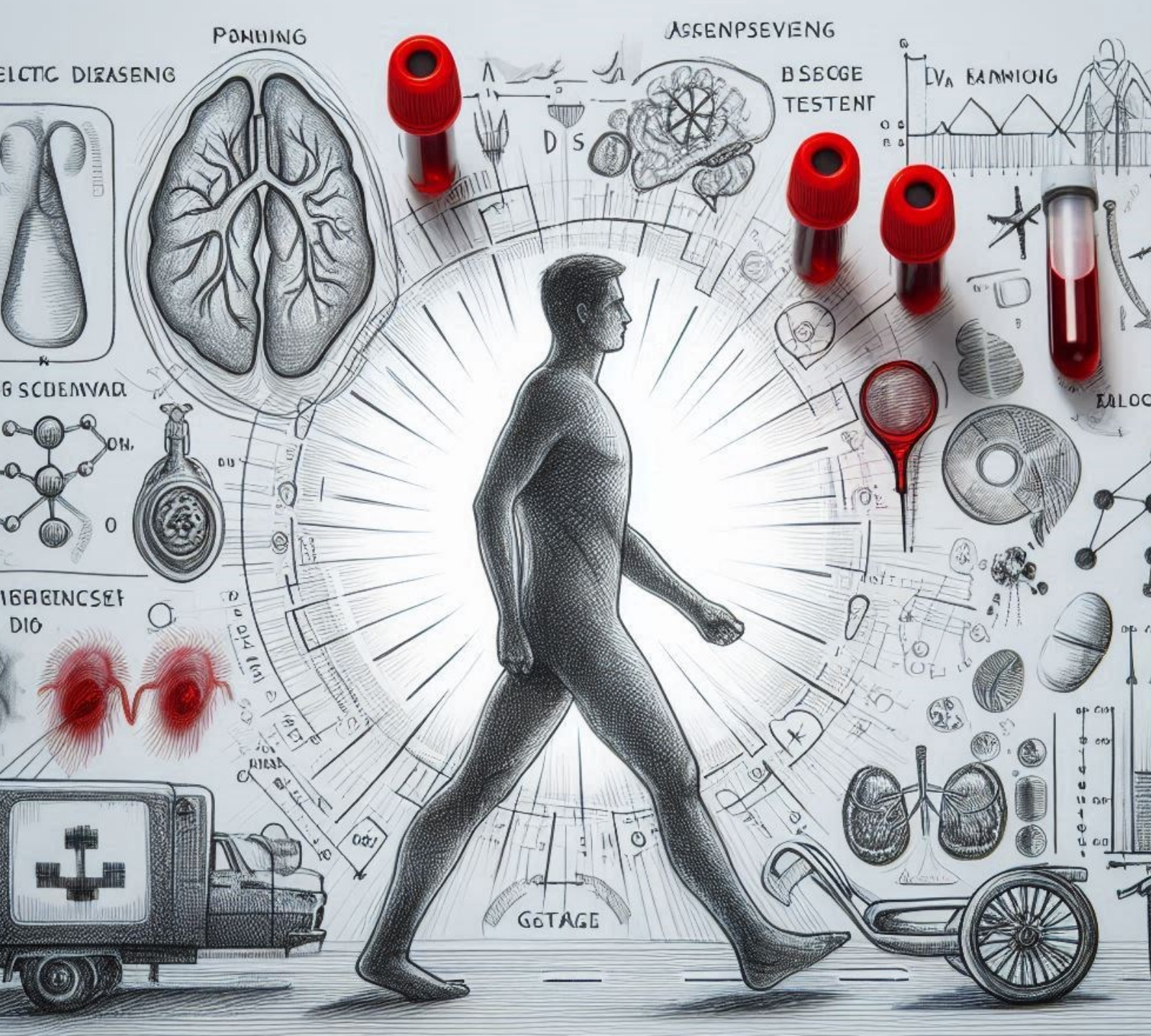




# Veje til bedre diagnoser

v. Charlotte Frendved og Perle Darsø

Dansk Selskab for  
PatientSikkerhed

PS!

REGION

# Dagsorden

- Hvorfor er det svært at stille en diagnose?
- Hvordan defineres en diagnosefejl? Og hvad er diagnosesikkerhed?
- Hvilke faktorer påvirker om der sker fejl?
- Hvor ofte sker der fejl?
- Hvad siger danske erfaringer
  - Veje til bedre diagnoser 1 og 2
- Hvad kan vi gøre ved det?

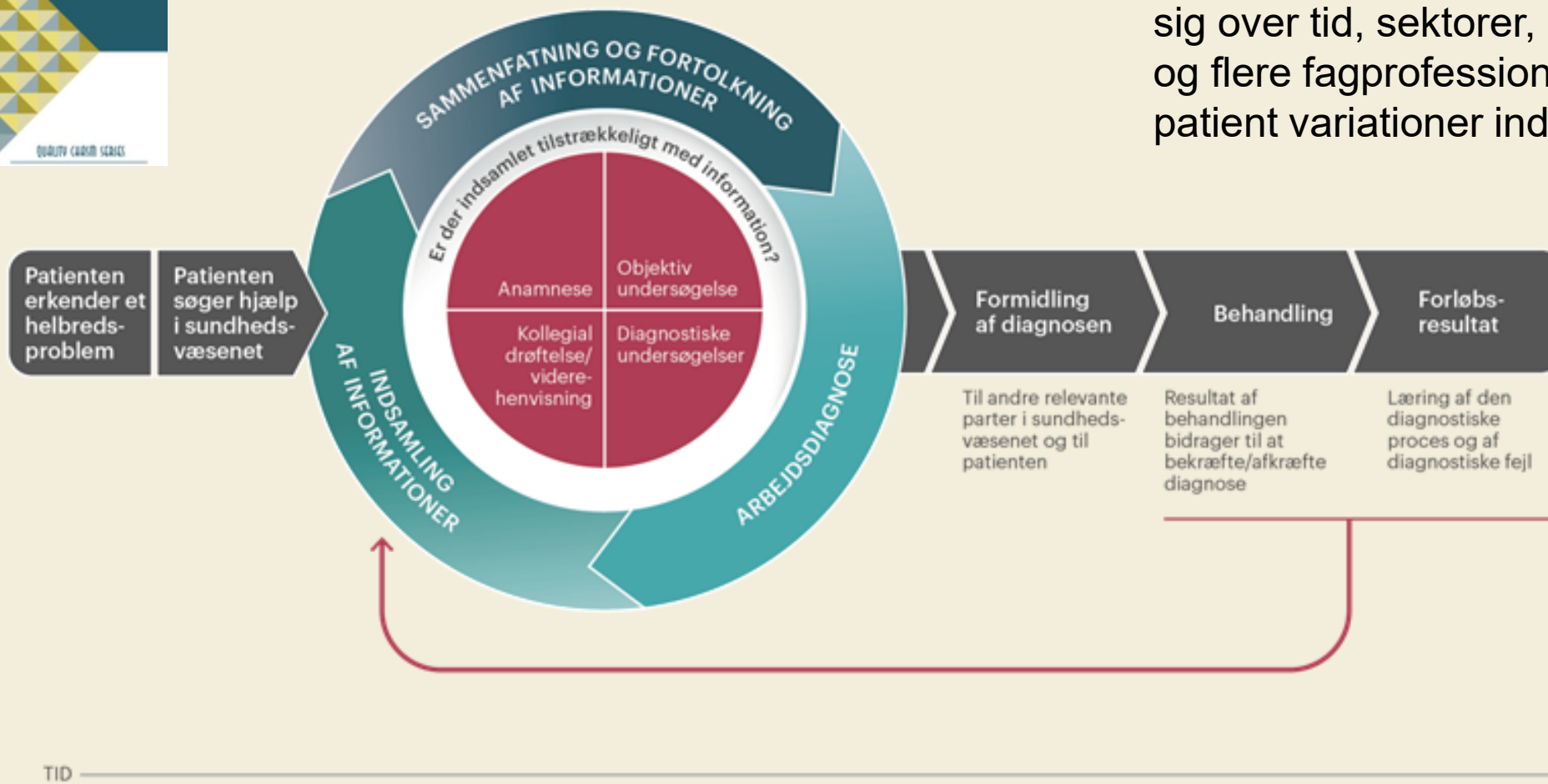
# En vanskelig disiplin – nålen i høstakken

200 symptomer  
10.000 forskjellige sykdomme



# Den diagnostiske proces

Kompleks aktivitet strækkende sig over tid, sektorer, afdelinger og flere fagprofessionelle med patient variationer indover





**Diagnosticering er svært**

# Definition på diagnosefejl

*”Manglende etablering af en **akkurat** og **rettidig** forklaring på patientens helbredsproblem eller manglende **kommunikation** af den forklaring til patienten”*

- Institute of Medicine (National Academies of Sciences)



# Diagnosesikkerhed

## Opnå

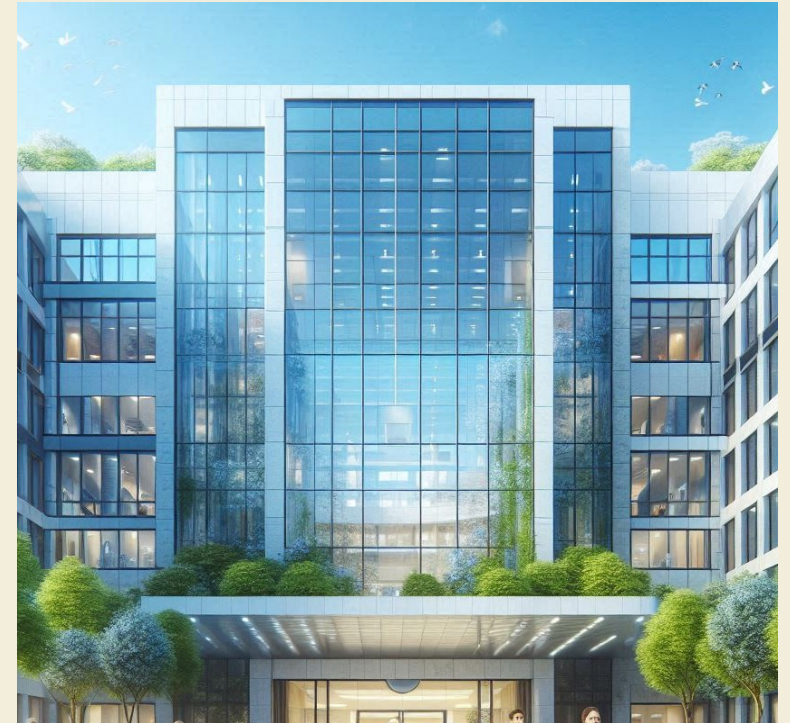
Sikker og rettidig  
diagnostik  
Rimeligt ressourceforbrug  
Patientinddragelse



## Undgå:

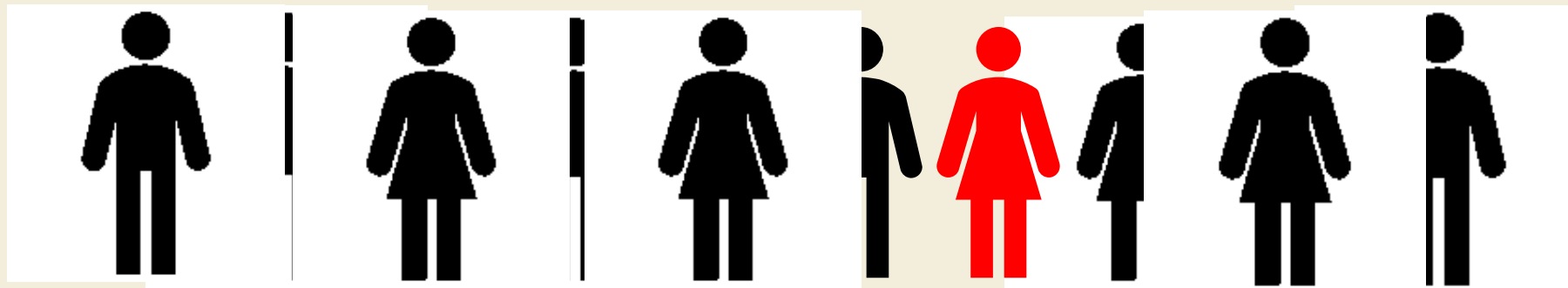
Overdiagnostik  
Overtestning  
Unødvendige  
undersøgelser/Spild

# Hvilke faktorer påvirker om der sker fejl?



*”1 ud af 10 diagnoser er forkerte, forsinkede eller oversete”*

- Mark Graber



# Veje til bedre diagnoser fra 2019 og 2023

## 1) Patienterstatningsdata 2009-2018

- Kvantitativ opgørelse – omfanget af diagnosefejl i DK
- Kvalitativ analyse – identificere mulige årsager og mønstre
- Skabe fokus på problemet



## 2) Dansk Patient Sikkerhedsdatabase (DPSP) / UTH data 2015-2020

- Diagnosefejl
- Svagheder/uhensigtsmæssigheder i den diagnostiske proces
- Ikke nødvendigvis medført skade for patient

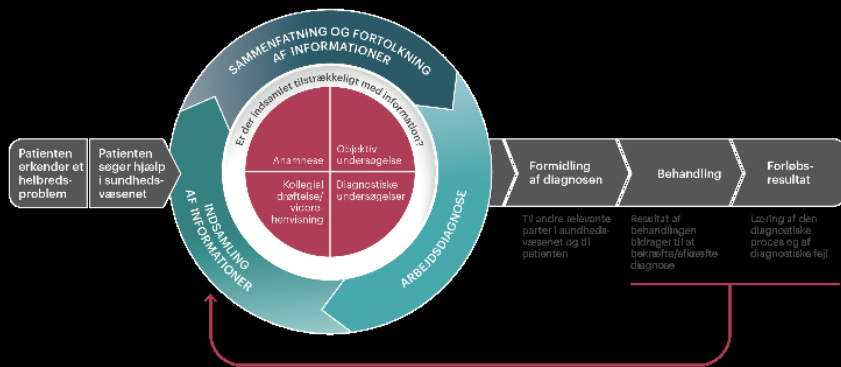


# Veje til bedre diagnoser 1 fra 2019

90.000 sager fra Patienterstatningen 2009-2018

- **760 personer / år får erstatning grundet diagnosefejl**
- Over de 10 år **udbetalt 2,25 mia. kr. i erstatning** for diagnosefejl
- **680 dødsfald i 10 årige periode** (x 1,8 højere end andre behandlingsskadesager i perioden)
- Læsioner (især brud og forstuvninger), kræftsygdomme, muskel- og ledsygdomme, hjertekarsygdomme, mavearmsygdomme

# Kvalitativ analyse af protokollerede sager



213 udvalgte sager

3 faser  
12 trin

Malpractice Risks in the Diagnostic Process, Annual Benchmarking Report 2014, CRICO <https://www.rmfi.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/Risks-in-theDiagnostic-Process>

## Analyzing the Diagnostic Process

The CBS taxonomy enables data analyses along the process of care that help identify where breakdowns most commonly occur. Each of the 12 steps described below presents focal points for more detailed analysis and opportunities for provider training and systems improvements.



### INITIAL DIAGNOSTIC ASSESSMENT

Covers the patient's presentation with a complaint, through the physician's assessment, differential diagnosis, and test orders. Factors that trigger malpractice allegations are primarily related to voids in the physician's evaluation of the patient's history and cognitive processing related to presentation, differential diagnosis, and test ordering.

- 1. Problem Noted, Care Sought**  
Issues: Access, scheduling, or waiting issues impede the patient from raising a relevant health problem, or delays him or her from seeking care for a recognized problem.
- 2. History and Physical Conducted**  
Issues: The patient's (personal and family) history is not fully recorded or updated; the physical examination is absent or inadequate.
- 3. Patient Assessed and Symptoms Evaluated**  
Issues: The patient's complaints or symptoms are not thoroughly addressed.
- 4. Differential Diagnosis Established**  
Issues: A narrow diagnostic focus, failure to establish a differential diagnosis, or reliance on a chronic condition or previous diagnosis.
- 5. Diagnostic Test(s) Ordered**  
Issues: The ordering of appropriate tests/imaging/labs is impeded by an incomplete or biased assessment.



### TESTING AND RESULTS PROCESSING

From the scheduling, performance, and interpretation of diagnostic tests, through the management of the test results. The factors that trigger malpractice allegations are primarily related to breakdowns in clinical systems for test result management, the cognitive skills related to interpretation, and communication of results to the ordering physicians.

- 6. Tests Performed**  
Issues: Ordered test/imaging is not performed, performed incorrectly, or specimen is mislabeled or mishandled.
- 7. Test Interpreted**  
Issues: Report of findings are determined to be incomplete or inaccurate; abnormal findings not ruled out.
- 8. Test Results Transmitted to/Received by Ordering Physician**  
Issues: Receipt/review of test result by ordering physician is not completed, or is significantly delayed.



### FOLLOW UP AND COORDINATION

Encompasses decisions made and actions taken after assessment and testing, including consultations and communication. The factors driving malpractice allegations are primarily related to failure to involve specialty consultation and breakdowns in communication among caregivers and between caregivers and the patient.

- 9. Physician Follows Up with Patient**  
Issues: Findings are not communicated to the patient, follow-up testing is not arranged, or follow up is not documented.
- 10. Referrals/Consults**  
Issues: Appropriate referrals to specialists (or consults) are not made or adequately managed, or identification of the physician responsible for ongoing care is unclear.
- 11. Patient Information Communicated Among Care Team**  
Issues: Failure by one or more provider to fully review or share patient information that influences ongoing diagnostic process.
- 12. Patient and Providers Establish Follow-up Plan**  
Issues: Patient fails to adhere to the follow-up plan, including appointments and treatment regimen.

# Patienterstatningens sager

## Indledende diagnostisk vurdering

1. Problem erkendt. Patienten søger hjælp
2. Anamnese og objektiv undersøgelse
3. Bedømmelse af patient og evaluering af symptomer
4. Differentialdiagnose(R)
5. Diagnostiske test ordineret

## Undersøgelse og resultater

6. Gennemførelse af undersøgelser/tests
7. Fortolkning af Undersøgelses- og testresultater
8. Kommunikation af resultater til relevant kliniker

## Opfølgning og koordinering

9. Sundhedsvæsnets opfølgning med patienten
10. Henvi sning/ Kollegial drøftelse
11. Deling af info om patientforløb blandt behandlere
12. Opfølgning saftaler mellem patient og behandler systemet

0,0% 10,0% 20,0% 30,0% 40,0% 50,0% 60,0%

# Veje til bedre diagnoser 2 fra 2023

Udtræk af Dansk Patientsikkerhedsdatabase 2015-2020 (I alt over en mio. hændelser)

- Pulje 1: 182 hændelser med relation til diagnose - fundet ved fritekstsøgning diagnos\*+"x" (alle alvorlighedsgrader: **ingen, mild, moderat, alvorlig, dødelig**)
- Pulje 3: Tilfældig stikprøve\* af alle\*\* **alvorlige/dødelige** hændelser. **269 hændelser**, **hvoraf** 78 fandtes var diagnoserelaterede.

\*repræsentativ 90%CI - \*\*21.306 i alt

# Kvalitativ analyse af de diagnose-relaterede hændelser

Pulje 1: 182 hændelser

Pulje 3: 78 hændelser

## Analyzing the Diagnostic Process

The CBS taxonomy enables data analyses along the process of care that help identify where breakdowns most commonly occur. Each of the 12 steps described below presents focal points for more detailed analysis and opportunities for provider training and systems improvements.



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Issues: A narrow diagnostic focus, failure to establish a differential diagnosis, or reliance on a chronic condition or previous diagnosis.

#### 5. Diagnostic Test(s) Ordered

Issues: The ordering of appropriate tests/imaging/labs is impeded by an incomplete or biased assessment.



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#### 11. Patient Information Communicated Among Care Team

Issues: Failure by one or more provider to fully review or share patient information that influences ongoing diagnostic process.

#### 12. Patient and Providers Establish Follow-up Plan

Issues: Patient fails to adhere to the follow-up plan, including appointments and

## Analyse af pulje 1 – alle grader af alvor

### Indledende diagnostisk vurdering

1. Problem erkendt. Patienten søger hjælp
2. Anamnese og objektiv undersøgelse
3. Bedømmelse af patient og evaluering af symptomer
4. Differentialdiagnose(R)
5. Diagnostiske test ordineret

### Undersøgelse og resultater

6. Gennemførelse af undersøgelser/tests
7. Fortolkning af undersøgelses- og testresultater
8. Kommunikation af resultater til relevant kliniker

### Opfølgning og koordinering

9. Sundhedsvæsenets opfølgning med patienten
10. Henvi sning/kollegial drøftelse
11. Deling af info om patientforløb blandt behandlere
12. Opfølgning saftaler mellem patient og behandlersystemet

- A. Mange trin involveret (>2)
- B. Manglende information

0,0% 5,0% 10,0% 15,0% 20,0% 25,0% 30,0% 35,0% 40,0% 45,0% 50,0%

## Analyse af pulje 3 (alvorlige/dødelige)

### Indledende diagnostisk vurdering

1. Problem erkendt. Patienten søger hjælp
2. Anamnese og objektiv undersøgelse
3. Bedømmelse af patient og evaluering af symptomer
4. Differentialdiagnose(R)
5. Diagnostiske test ordineret

### Undersøgelse og resultater

6. Gennemførelse af undersøgelser/tests
7. Fortolkning af undersøgelses- og testresultater
8. Kommunikation af resultater til relevant kliniker

### Opfølgning og koordinering

9. Sundhedsvæsnets opfølgning med patienten
10. Henvisning/ Kollegial drøftelse
11. Deling af info om patientforløb blandt behandlere
12. Opfølgningssamtaler mellem patient og behandlersystemet
- A. Mange trin involveret (>2)
- B. Manglende information

0% 10% 20% 30% 40% 50%

# Begge analyser

- Ved retrospektiv journalgennemgang kan hændelser klassificeres efter trin i den diagnostiske proces
- Men det er svært at se den grundlæggende årsag, fx
  - Travlhed
  - Manglende patientkommunikation
  - Manglende adgang til seniore kolleger

# Alvorlige og dødelige hændelser

## Pulje 3

- Audit fandt, at **33 %** (78/269) af hændelserne var diagnoserelaterede
- Til sammenligning fandtes **22 %** af hændelserne i samme pulje at være medicinrelaterede

# Hvad kan vi gøre ved det?



| AIM                              | PRIMARY DRIVERS                           | SECONDARY DRIVERS                                                                                                 |
|----------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| IMPROVE DIAGNOSIS TO REDUCE HARM | Effective Teamwork                        | Diagnostic teams include diverse health care disciplines and patients and families                                |
|                                  |                                           | Diagnostic teams model PFE and culture of safety principles and practices                                         |
|                                  | Reliable Diagnostic Process               | Organizational structures optimized for diagnostic safety                                                         |
|                                  |                                           | Clinical operations and information flow effectiveness                                                            |
|                                  |                                           | Accessible specialty expertise                                                                                    |
|                                  | Engaged Patients and Family Members (PFE) | Patient and family members on diagnostic team                                                                     |
|                                  |                                           | Patient and family partnership in diagnosis improvement, Governance, policy, and in error reporting and follow-up |
|                                  | Optimized Cognitive Performance           | Effective clinical decision support                                                                               |
|                                  |                                           | Clinical reasoning abilities                                                                                      |
|                                  |                                           | Reflective practice                                                                                               |
|                                  | Robust Learning Systems                   | Diagnostic error identification                                                                                   |
|                                  |                                           | Diagnostic performance feedback                                                                                   |
|                                  |                                           | Continuous learning about diagnosis                                                                               |

# Ressourcer

## Strategy

Seek feedback  
on diagnostic  
decisions

"Byte" sized  
practice

Consider  
biases

Make diagnosis  
a team sport

Foster critical  
thinking

## Webinar #1: The Fundamentals of Diagnostic Errors in Hospitals

September 12, 3:00-4:00 PM ET



## Calibrate Dx: A Resource To Improve Diagnostic Decisions



## Measure DX: A Resource to Identify, Analyze, and Learn From Diagnostic Safety Events



## Diagnostic Feedback to Reduce Error and Improve Diagnostic Performance



Diagnostic error is defined as the failure to establish or communicate an accurate and timely explanation of a patient's health problem. Unfortunately, diagnostic errors are not uncommon – affecting an estimated 12 million people each year in the US alone <sup>1</sup>.

Providing feedback to clinicians and organizational leaders about diagnostic performance is an essential intervention to reduce diagnostic errors.<sup>2</sup> **Recalibration**, the process of a clinician becoming aware of his or her diagnostic abilities and limitations through feedback, enables the clinician to gauge current diagnostic accuracy, and improve future performance.

Diagnostic errors harm patients and organizational health care quality – posing both patient safety and medico-legal risks. Diagnostic errors:

- Account for 6-17% of hospital adverse events <sup>1</sup>
- Are the leading type of paid medical malpractice claims (28.6%) <sup>3</sup>
- Account for the highest proportion of total medical malpractice payments (35.2%) <sup>3</sup>

## The Safer Dx Instrument: Items for Determining Presence or Absence of a Diagnostic Missed Opportunity

Rate the following items for the episode of care under review:

1 = Strongly Disagree 7 = Strongly Agree

|     | Item                                                                                                                                                                                                                                | Score |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1.  | The documented history was suggestive of an alternate diagnosis, which was not considered in the diagnostic process.                                                                                                                |       |
| 2.  | The documented physical exam was suggestive of an alternate diagnosis, which was not considered in the diagnostic process.*                                                                                                         |       |
| 3.  | Data gathering through history, physical exam, and review of prior documentation (including prior laboratory, radiology, pathology or other results) was incomplete, given the patient's medical history and clinical presentation. |       |
| 4.  | Alarm symptoms or "Red Flags" (i.e. features in the clinical presentation that are considered to predict serious disease) were not acted upon.                                                                                      |       |
| 5.  | The diagnostic process was affected by incomplete or incorrect clinical information given to the care team by the patient or their primary caregiver.                                                                               |       |
| 6.  | The clinical information (i.e. history, physical exam or diagnostic data) should have prompted additional diagnostic evaluation through tests or consults.                                                                          |       |
| 7.  | The diagnostic reasoning was not appropriate, given the patient's medical history and clinical presentation.                                                                                                                        |       |
| 8.  | Diagnostic data (laboratory, radiology, pathology or other results) available or documented were misinterpreted in relation to the subsequent final diagnosis.                                                                      |       |
| 9.  | There was missed follow-up of available or documented diagnostic data (laboratory, radiology, pathology or other results) in relation to the subsequent final diagnosis.                                                            |       |
| 10. | The differential diagnosis was not documented OR The documented differential diagnosis did not include the subsequent final diagnosis.                                                                                              |       |
| 11. | The final diagnosis was not an evolution of the care team's initial presumed diagnosis (or working diagnosis).                                                                                                                      |       |
| 12. | The clinical presentation at the initial or subsequent presentation was mostly typical of the final diagnosis.                                                                                                                      |       |
| 13. | In conclusion, based on all the above questions, the episode of care under review has a missed opportunity to make a correct and timely diagnosis.                                                                                  |       |

\* Physical exam includes vital signs

Additional information, please check "Yes" if applicable:

- Care episode involves...
- Care escalation (e.g. h... condition that the pat...
- Patient initially refuse...

Brief description of misse... that helped with your dec...



## IMPROVING DIAGNOSIS IN MEDICINE

>>>

DIAGNOSTIC ERROR CHANGE PACKAGE

# Nationalt Netværk for diagnosesikkerhed

- Fagligt forum oprettet i foråret 2023
- Aktuelt 35 fagfolk bredt geografisk og fagligt repræsenteret
- Tværfaglighed, Klinikere, kvalitets- og risikomanagere, forskere, STPS
- Kvartalsvise netværksmøde (på Teams) med fagligt oplæg, vidensdeling, netværk, projekt og idé-udvikling
- Næste møde 24. oktober er åbent for alle



Kontakt vedr. netværket: [dorthe.vilstrup.tomsen@patientsikkerhed.dk](mailto:dorthe.vilstrup.tomsen@patientsikkerhed.dk)

# Links til ressourcer

- [Diagnostic Error Change Package](#)
- [Agency for Healthcare Research and Quality \(ARQH\)](#)
- [Measure DX \(AHRQ\)](#)
- [The Safer DX Instrument](#)
- [Fiskeben som metode til analyse af diagnosefejl](#)
- Strategier som kan anvendes af klinikere [inkl. Calibrate DX \(AHRQ\)](#)
- BMJ artikel om ["Five strategies for clinicians to advance diagnostic excellence"](#)
- GoodDX - [The online library of diagnostic performance feedback resources](#)
- [The Safer DX checklist \(IHI\)](#)
- [TheLeapFrog group webinar series](#)

Flere af billederne i præsentationen er genereret med AI ved hjælp af Microsoft co-pilot. Der er også billeder af konkrete publikationer og hjemmesider som er listet på denne side.