

## Patient Safety in Danish Cancer Treatment

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Janne Lehmann Knudsen  
Head of Quality, MD, Ph.D., MHM  
Danish Cancer Society



## The situation in Denmark

- 30,000 people get cancer each year – 230,000 live with cancer
- The cancer pathway: several treatment facilities, complex treatments, different healthcare professionals and sectors
- Adverse events: 9 % of somatic admissions in Denmark, 40 % preventable\*
- Prevention requires knowledge – which adverse events occur in cancer treatment?

\* Schioler et al. Incidence of adverse events in hospitalized patients. The Danish Adverse Event Study. Ugeskr Læger 2001; 163: 5370-8.



## Objective

- Assessment of patient safety risks in hospital treatment of Danish cancer patients
  - Describe adverse events in cancer treatment
    - number
    - severity
    - type
  - Propose actions for prevention and correction



## Methods

- Two complementary parts and methods
  - A. Retrospective chart review using the Global Trigger Tool (GTT)
  - B. Analysis of adverse events reported by health care professionals to the Danish Patient Safety Database (DPSD) in cooperation with the National Board of Health



## GTT – material

- A total of 573 records
- Records:
  - random sample of records from 5 wards
  - May-October 2008, 6 months
  - extra criteria of inclusion: cancer diagnosis

Ward	Type of cancer	Number of records
Gynecologic surgery	Uterine, cervical, ovarian, vulvar	118
Thoracic surgery	Lung	96
Gastro-Intestinal surgery	Colon, rectal, breast, neck	120
Breast surgery	Breast	119
Oncology	Oral cavity, thyroid, breast, lung, esophageal, gastric, colon, rectal, pancreatic, renal, adrenal, peritoneal, prostate, ovarian, melanoma and leiomyosarcoma	120



## GTT – results

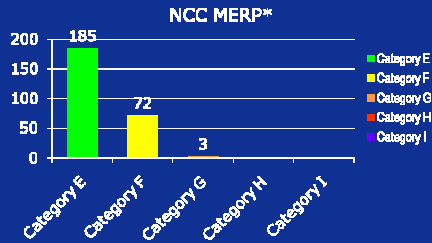
- Aggregated results – all wards:
  - 573 records (from 96 to 120 records per ward)
  - 260 AEs (from 12 to 118 AEs per ward)
  - 3796 patient days (from 511 to 893 patient days per ward)
  - 159 records with at least one AE (from 12 to 54 records with one AE per ward)
- 68 AEs/1,000 patient days
- 46 AEs/100 admissions
- 28 % admissions with an AE

**IHI reference, approximately:**  
•90 AEs/1,000 patient days  
•40 AEs/100 admissions  
•30-35 % admissions with AE



## GTT - harm

- Distribution of Harm by Category – all wards

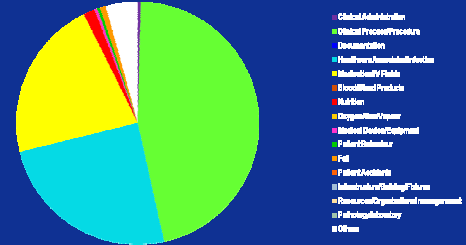


\*National Coordinating Council for Medication Error Reporting and Prevention



## GTT – event types

AE types\*



\*International Classification for Patient Safety (ICPS), WHO



## GTT – major event categories

- Major Event types\* – all wards

- Clinical Process/Procedure - **46 %** (120/260)
  - Surgical complications (92/120, 77 %)
    - Bleedings (20 %)
    - Perforations/lesions ( 9 %)
  - Decubitus ulcers ( 6 %)
- Healthcare Associated Infection - **25 %** (64/260)
  - Airway (44 %)
  - Urinary tract (27 %)
  - Surgical site (11 %)
- Medication/IV Fluids - **22 %** (56/260)
  - IV-catheter complications (34 %)
  - Problems related to epidural analgesia (32 %)

\* International Classification for Patient Safety, WHO



## DPSD – background



- Danish Act on Patient Safety

- **Objective:** to improve patient safety in the Danish Health Care System
- **How:** health care professionals reporting of adverse events in hospitals to The National Board of Health, Danish Patient Safety Database (DPSD)
- **QBS!** Health care professionals reporting adverse event will not – as a result of the reporting – be subjected to disciplinary investigations or measures
- **Expansion:** By 2010 inclusion of the primary sector, by 2011 patient/family reporting of events



## DPSD - material

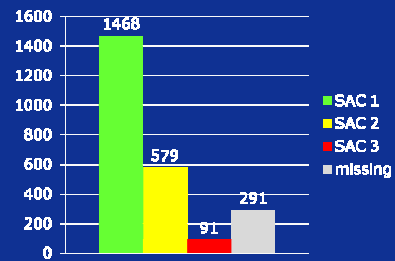
DPSD project material

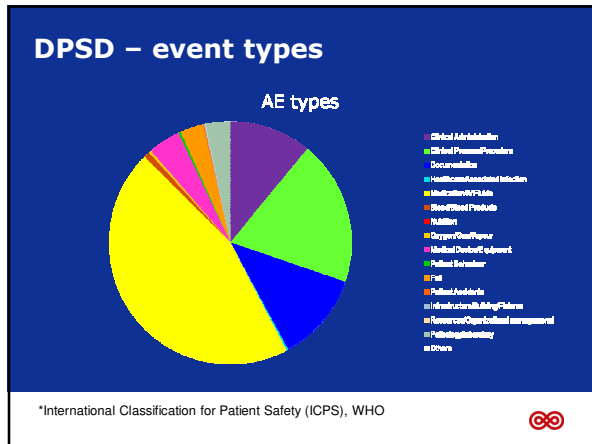
- January 2004 – June 2008, 4½ years
- A total of 40,773 AEs reported to DPSD
- No disease registration – identification of cases using text search
- 2,429 cancer related AE-reports in DPSD (6 %)



## DPSD – SAC codes

- Distribution of Risk by Category (SAC Matrix)





### DPSD – Case

#### Chemotherapy

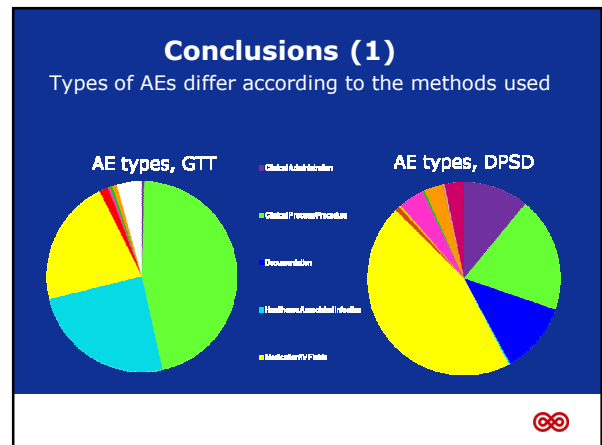
- Patient has received a full dose of Cisplatin, even though the GFR\* is reduced by 50 % during treatment.
- When prescribing next series of chemotherapy it was discovered, that the dose wasn't reduced as intended.
- Unknown consequence at the time the event report is filed - risk of kidney damage

\*GFR: Glomerular Filtration Rate describes the flow rate of filtered fluid through the kidney

### DPSD - results

- Major Event types\*
  - Medication/IV Fluids (45 %)
    - Chemotherapy (70 %)
  - Clinical process (19 %)
    - Procedure/treatment (60 %): i.e. Surgery, Radiotherapy
  - Documentation (12 %)
    - Reports/Results/Images (54 %)
    - Charts/medical records (32 %)
  - Clinical administration (11 %)
    - Referral/Consultation (35 %)
    - Appointment (34 %)

\* International Classification for Patient Safety, WHO



### Conclusion (2)

- We have identified some harm/risks by using two approaches:
  - GTT is 'global' - not cancer specific, and does not include outpatients
  - DPSD data is subject to limitations of under-reporting
  - Focus limited to hospitals care
- No method can draw a complete picture of the risks in cancer treatment.

*Two pieces of the puzzle has been presented*



## Thank you for your attention

Henriette Lipczak: [hlz@cancer.dk](mailto:hlz@cancer.dk)  
Janne Lehmann Knudsen: [jlk@cancer.dk](mailto:jlk@cancer.dk)

Danish Cancer Society  
Unit for Quality and Documentation  
Strandboulevarden 49  
DK-2100 Copenhagen  
Tlf.: +45 3525 7500

