Improving diagnosis in Danish Healthcare 2

Internationally, there is a growing awareness on diagnostic errors as a major – and so far, overlooked patient safety problem.

In 2019, the Danish Society for Patient Safety (PS!) and the Danish Patient Compensation Association published the report 'Improving Diagnosis in Danish Healthcare', which exposed the high frequency of diagnostic errors occurring in the Danish healthcare system which have major consequences both for patients and the healthcare system's finances.

Now, PS! Has carried out a new analysis – this time of 'adverse events', reported to the Danish Patient Safety Database (DPSD) – to investigate whether these cases can be a source of knowledge about what goes wrong in the diagnostic process. The analysis has been carried out in collaboration with Danish Patient Compensation Association, and the Danish Patient Safety Authority has made data available and contributed to the report.

The Danish Patient Safety Authority annually collects more than 200,000 reports of patient safety events by healthcare workers and patients through a compulsory, non-punitive reporting system. Reports are registered in the Danish Patient Safety Database. The DPSD has no classification of diagnosis-related events.

The report looks at the entire patient journey in relation to diagnostics, from the patient's access to the healthcare system, medical history, physical examination, the doctor's reasoning, ordering tests, implementation, interpretation and communication of test results, follow-up with and possible referral of the patient, communication between the health professionals, and the subsequent follow-up between the patient and healthcare system.

The data material relating to adverse events is reported to the Danish Patient Safety Database. Many of the events analyzed did not cause harm to the patient, and it is therefore not necessarily a case of "diagnosis errors". However, it is meaningful to look at these events, as they reveal potential limitations and opportunities for improvement in the workflows involved in the diagnostic process.

Three samples of adverse events from the Danish Patient Safety Database 2015-20 have been reviewed:

Sample 1: Found with free text search for "diagnose" (235 events).

Sample 2 Events with problem codes "delayed reaction to test results" and "delayed assessment" (184 events).

The first two samples are extracted to find cases with a high probability of a diagnosis-related problem, in order to carry out a closer qualitative analysis of patterns. They include all degrees of severity (from no harm to mild, moderate, severe, and fatal).

Sample 3 A random selection of all 'severe' and 'fatal' events from the period (269 events).

Sample 3 is extracted to assess the prevalence of diagnosis-related events among severe/fatal events.

The three samples are analyzed using scoring tools that make it possible to assess which phase of the diagnostic process is affected. One of the tools used was the Diagnosis Error Evaluation and Research (DEER) taxonomy, as recommended in the publication Measure Dx from Agency for Healthcare Research an Quality, AHRQ.

Results

Events with harm of all severity grades

- In sample 1 and sample 2, a very high incidence of diagnosis-related events is seen (84%/67%). The high percentage reflects that the search criteria used have been relevant in terms of finding events suitable for a qualitative analysis.
- More than half of the events in sample 1 and sample 2 (63%/60%), which include many events 'without harm' and with 'mild harm' to the patient, concern the test and results phase and follow-up of these by and among healthcare professionals.
- A sub-analysis shows that communication of the result to the relevant clinician is commonly a vulnerable step in the process.
- In sample 1, more than 20% of the events focus on 'sharing of information' among the healthcare professionals involved.
- In sample 2, problems with the healthcare systems 'follow-up with the patient' occur in almost 40% of events.

Events with severe and fatal harm

- Approx. one third of all severe and fatal events reported to the Danish Patient Safety Database are related to the diagnostic process.
- Among the severe and fatal events, there are at least as many diagnosis-related as medication-related events.
- Analysis of sample 3 indicates that in the case of severe and fatal diagnosis-related events, it is most often the clinical assessment of the patient where errors occur. This may result in a lack of referral and collegial discussion. Failure or delay to recognize/weigh urgency is also a theme here.
- Only 28% of events were related to the test and results phase (much fewer than for samples 1 and 2, which consisted of events of all severity levels).
- However, among the severe and fatal events in sample 3, there are also examples of the 'ordering of tests' and the 'interpretation and communication of the results' being the cause of harm. As such, a recommendation to strengthen these processes may include the analysis of less severe events to identify weaknesses in the work processes.

The Danish Society for Patient Safety

The Danish Society for Patient Safety (PS!) is an independent organization working to improve patient safety across Danish healthcare.

PS! support and help the Danish healthcare system to accelerate improvements in patient safety. This is done by producing and disseminating knowledge, implementing methods and building capacity that can better support patient safety.

https://patientsikkerhed.dk/english/