Alert information in the Norwegian Summary Care Record

The introduction of the Norwegian Summary Care Record means that all alert information registered for each individual patient will be available all over the country. This will give us a more abundant information base for adaptation of treatment.

The Summary Care Record is an e-health system (a health information exchange, HIE) that provides access to selected patient information adapted to medical emergencies. The purpose of introducing the Summary Care record is to enhance patient safety and quality of treatment, since a lack of patient information is constantly reported in the context of admissions to A&E departments (1). This Summary Care Record contains updated information on medicines dispensed to the patient by Norwegian pharmacies, an overview of the patient's contact history from hospitals, contract specialists and other units in the specialist healthcare system, the patient's address from the National Registry, his or her GP and alert information. The patients themselves can register contact persons and next of kin, medical history and communication disabilities or special needs.

The first reference to the Summary Care Record was made in the national e-health strategy «Samspill 2.0», published in 2008 (2). The Summary Care record was introduced as a pilot trial in the autumn of 2013 in St. Olavs Hospital and the A&E centres in Trondheim, Malvik, Melhus and Klæbu municipalities. In the spring of 2014, the Summary Care Record was also tested in Stavanger University Hospital and the A&E centres in Stavanger, Randaberg and Sola municipalities. GP practices can participate if they so wish. Altogether, 400 000 inhabitants now have a Summary Care Record, and in the autumn of 2014 both trial areas will be expanded so that the number of inhabitants enrolled will reach 700 000. Inhabitants have the opportunity to opt out of the Summary Care Record.

> «In the Summary Care Record, alert information should be registered in the most precise way possible»

Alert information

The contents of a patient record can be divided into three parts: alert information, important information and other information (Figure 1). A key element of content in the development of the Summary Care Record pertained to the types of information that would be of critical importance in emergencies, specifically «information that in a given situation could have a decisive impact on the choice of health assistance, and if absent could lead to a risk of error or delay in the provision of treatment» (3).

What should be included as alert information was studied by a project group assessing international models for such alert information and then specifying the information areas and content elements. The Swedish model of «varningsinformation» was chosen as a basis (4). Quality assurance of this work was provided by a group of 17 experts, with input from another twelve (5). The model enjoyed support from all the reference groups for the Summary Care Record project, including representatives of unions, healthcare providers, patients' associations and others.

In issue 15/2014 of the Journal of the Norwegian Medical Association, Myren and collaborators have written an interesting and noteworthy article on the origin of the CAVE concept and its history in Norwegian patient records (6). They refer to the fact that the use of CAVE as a concept is no longer recommended in the Norwegian Summary Care Record. CAVE is most often used for describing adverse reactions to medicines and is often perceived as an instruction or contraindication rather than as a precise description of a reaction. In contrast, the concept of «alert information»

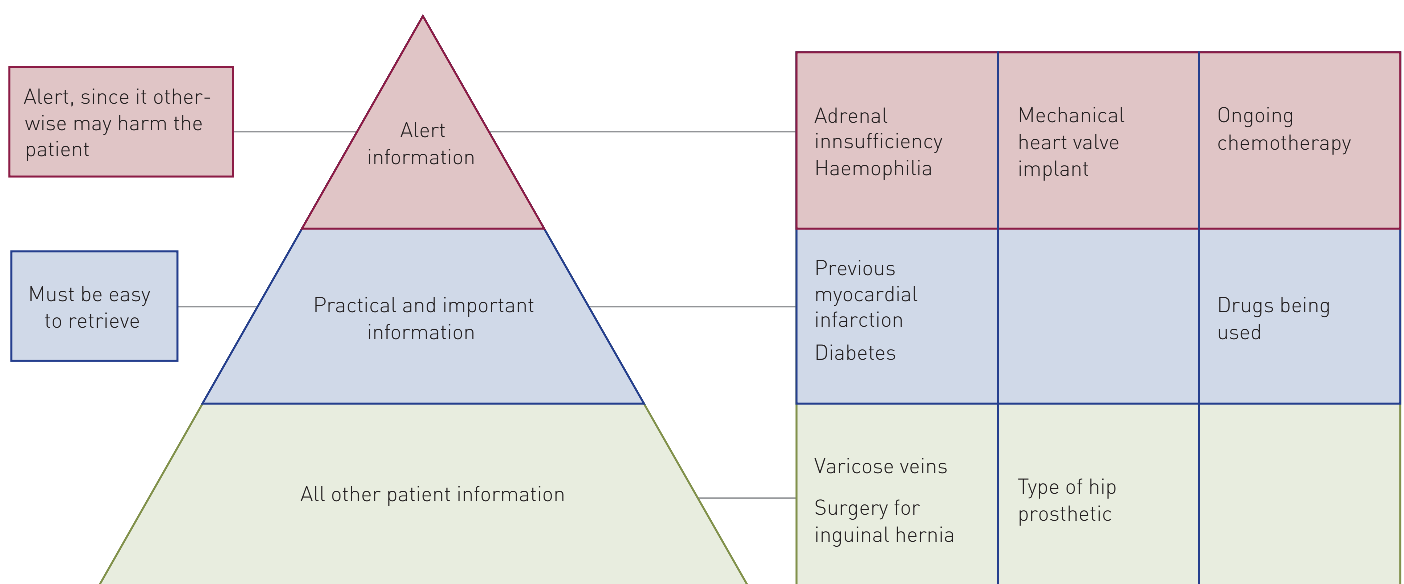

Figure 1 *The relationship between alert information and the total content of a patient record*

encompasses information that may be difficult to ascertain in an emergency situation, but nevertheless may be potentially life-threatening if it is not taken into account in the provision of treatment, and is thus more comprehensive than CAVE. Examples include drug allergies, other allergies, hypersensitivity reactions, adverse reactions, particular diseases (such as haemophilia, angioedema, Addison's disease, porphyria etc.), implants, ongoing therapies (such as chemotherapy) and previous complications from anaesthesia.

Precise documentation

Therapists will have varying levels of competence and access to resources needed to handle emergencies. An anaesthetist with a trained team and sophisticated equipment will have completely different preconditions for handling a patient in shock than a single foundation doctor located two hours away from the nearest hospital.

In different care settings, doctors must have varying approaches to the amount of medical risk they should take, based on their level of competence and the resources available. Alert information should therefore be described in neutral and precise terms in light of the situation at the time, without any recommendations to colleagues regarding how they should address later situations. A foundation doctor in a rural district should show extreme care in prescribing drugs to which the patient is allergic, while an anaesthetist in a hospital has all the necessary resources to handle a possible anaphylaxis.

In the Summary Care Record, alert information should be registered with the highest level of precision possible. For allergic reactions against medications, the product should preferably be entered, alternatively at the ATC level (Anatomical Therapeutic Chemical Classification System). A first-time reaction should be documented, ideally with the date, alternatively with the patient's age at the time of the reaction. It is also possible to note whether the information has been provided by the patient, his or her next of kin, patient records or test results, as well as the registering doctor's opinion as to whether this is a suspected, likely or confirmed reaction. Thus, the information will be recorded with the prevailing degree of certainty, and the next doctor can use the information in light of the patient's situation, availability of resources and medical risk. Alert information provides a better basis for this assessment than the classic «Cave Penicillin».

To alert new healthcare providers to a potential risk for the patient, it is essential that all doctors document alert information as soon as possible after becoming aware of this information. A new feature in the introduction of the Summary Care Record is that this information becomes available nationwide, and alert information will no longer restricted to separate electronic medical records in local institutions. It is thus essential for doctors to be consistent and use a standardised method for documenting the information, like the one we are now testing for the Summary Care Record. A revised standard for alert information will be submitted for a national hearing round in the autumn of 2014. In the longer term, the vision is for alerts to be automatically included in the ordinary documentation in the electronic medical record, thus eliminating the need for manually documenting alert information separately, as we are doing today.

For those who wish to try the new model, a demonstration version of the Summary Care Record is available on the web and via Norsk Helsenett, the Norwegian Secure Health Network (7).

Eirik Nikolai Arnesen
eirik.arnesen@helsedir.no
Bent Asgeir Larsen

Eirik Nikolai Arnesen (born 1974), Specialty Registrar in Public Health and Senior Advisor, Section for Architecture, Division of e-Health and ICT, Norwegian Directorate of Health. He was medically responsible in the Summary Care Record project from 2011 to 2014.
The author has completed the ICMJE form and declares no conflicts of interest.

Bent Asgeir Larsen (born 1955), Specialist in General Practice and GP at Karrestad Medical Centre. He has been hired by the Norwegian Directorate of Health for studies and development of the Summary Care Record since 2010.
The author has completed the ICMJE form and declares no conflicts of interest.

References

1. Frydenberg K, Brekke M. Kommunikasjon om medikamentbruk i henvisninger, innleggelsesskriv og epikriser. Tidsskr Nor Legeforen 2011; 131: 942–5.
2. Helsedirektoratet. Samspill 2.0 – Nasjonal strategi for elektronisk samhandling i helse- og omsorgssektoren 2008–2013. www.helsedirektoratet.no/publikasjoner/samspill-20-nasjonal-strategi-for-elektronisk-samhandling-i-helse--og-omsorgssektoren-2008-2013/Sider/default.aspx (26.9.2014).
3. LOV-2012-06-22-46. Lov om endringer i helseregisterloven mv. (opprettelse av nasjonal kjernejournal m.m.). http://lovdata.no/dokument/NL/lov/2012-06-22-46/KAPITTEL_1 (26.9.2014).
4. Sjukvårdsrådgivningen. Varningsinformation Etapp 2, Slutrapport. www.nepi.net/res/dokument/Slutrapport-varningsinformation-etapp2.pdf (26.9.2014).
5. Helsedirektoratet. Kritisk og viktig helseinformasjon i kjernejournal. http://helsedirektoratet.no/publikasjoner/kritisk-og-viktig-helseinformasjon-i-kjernejournal/Sider/default.aspx (26.9.2014).
6. Myren S, Spigset O, Larsen O. Vakthund i journalen. Tidsskr Nor Legeforen 2014; 134: 1486–7.
7. Helsedirektoratet. Opplæring av helsepersonell. http://helsedirektoratet.no/it-helse/kjernejournal/opplering-for-helsepersonell/Sider/default.aspx (9.7.2014).

Received 4 September 2014, first revision submitted 15 September 2014, accepted 26 September 2014. Editor: Hanne Støre Valeur.