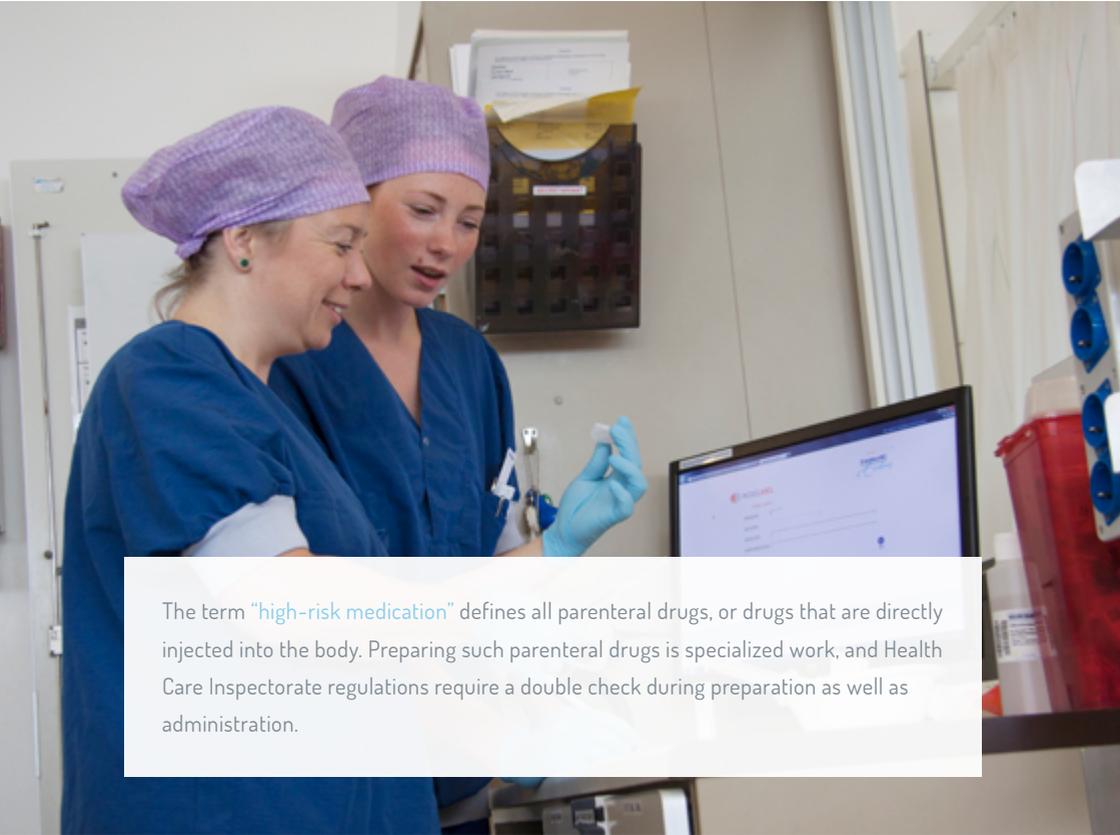


# Patient Safety First at the Erasmus MC



MEDIC**LABEL**

At the Erasmus MC, patient safety is one of the most important focus areas. To increase and ensure patient safety, the Erasmus MC has implemented a Safety Management System for high-risk medication. Medic-label plays an important role in the Safety Management System: it generates specifically designed barcode labels that are applied to all medication before they are administered to patients.



The term “[high-risk medication](#)” defines all parenteral drugs, or drugs that are directly injected into the body. Preparing such parenteral drugs is specialized work, and Health Care Inspectorate regulations require a double check during preparation as well as administration.



## Dave Gonlag, nurse anesthetist at the Erasmus MC

“Day after day, a wide array of intravenously administered drugs is prepared for use on patients in operating rooms. Their preparation follows the protocols laid out in our Safety Management System. Before Mediclabel, we used pre-printed labels with color coding to label the ampules. By far not all preparations had a dedicated label, so we were using blank labels for the others. All the required information was added by hand. Needless to say, the labels were not always easy to decipher, and sometimes, assumptions would be made based on the color of the label. This all now belongs to the past thanks to Mediclabel and a single standard label approach. On that standard label, we do not use color coding anymore, but a GS1 Datamatrix barcode. This eliminates incorrect assumptions and gets us back in control.”

“Before making our final choice, we looked at a number of solutions. The possibilities, flexibility and user-friendliness of Mediclabel finally won us over. We can now work according to a single standard, and follow our Safety Management System’s protocols. All activities are fully traceable and introducing barcode scanning helps us to improve medication and patient safety.”

## Parenteral preparations

Mediclabel helps the nurses in anesthesiology to prepare parenteral drugs in observance of the Safety Management System protocols. “Mediclabel helps us to ensure that the correct substance is prepared in the right concentration and in the right manner. It complements the guidelines on parenteral administration set forth in the Quality Information System.”





Dave Gonlag gives us a demonstration of the process: "I first log on by scanning the barcode located on my staff identification card. The system identifies me as a preparer, and I can now directly select the medication that I need to prepare and generate the appropriate labels. The system calculates the tenability for me and displays it on the label. During the preparation of parenteral drugs, I can directly access our Quality Information System. MediclabeL uses the appropriate concentrations, as documented in the Quality Information System, and so a standard process is followed. MediclabeL can be used for the preparation of individual ampoules as well as for medication delivered by means of a pump. The label now precisely states how the medication is to be put into solution. My colleagues and myself find this a great improvement."

## The double check

“The label has a blank space for my initials, being the preparer, as well as for the initials of the anesthesiologist, as the controller. Once initialed by me, all preparations are neatly placed on a tray. The emptied ampule is placed next to the syringe for additional safety. I then pass the tray to the anesthesiologist, who checks the prescribed medication and confirms by placing his initials on the label. This completes the double check and warrants medication safety.”



## Consistency

The Erasmus MC strives to work according to a single standard system. Consistent working practices yield transparency and safety. The system has been validated and approved for use by a hospital pharmacist. In the OR itself the nurse anesthetist can access Mediclabel directly from the Patient File Management System to generate labels for required additional medication. Mediclabel is also in use in several post-op care units, the intensive care and intensive cardiac care units, the thorax center, the Erasmus MC Cancer Institute (formerly known as Daniel den Hoed), the Erasmus MC-Sophia (children's hospital) and the day clinic.

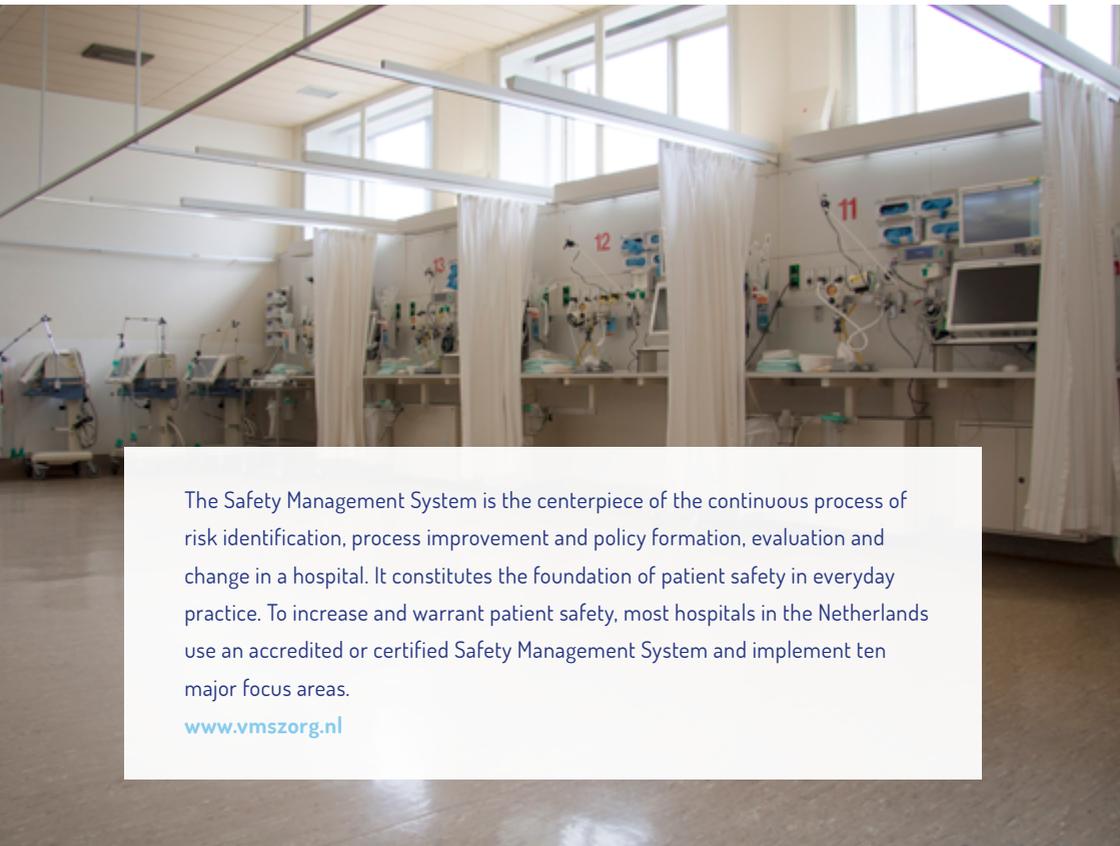


## Lessons learned

“My advice would be to think carefully about how the system should ideally support daily operations. Follow the different steps that all involved units and suppliers must go through, and continuously validate against the established safety protocols. Start designing the label in time, in close cooperation with the hospital pharmacist. It is not easy to get to a standard label design that satisfies all requirements and is easy to use at the same time. Ask the ultimate end users to test different designs. In order to build support for the new system, the look and feel as well as the user-friendliness are of great importance. Keep it simple as possible.”

Dave’s enthusiasm is obvious as he carries on: “In the wake of the implementation, we experienced a renewed interest for the topic from the anesthesiology staff, showing in all sorts of suggestions aiming at improving the preparation and administration of parenteral medication even more. This has brought us to consider simplifying a number of process steps by having the system taking the user by the hand even more in the future. And besides that, we would like to introduce an additional check before administering the medication by using the barcode.”





The Safety Management System is the centerpiece of the continuous process of risk identification, process improvement and policy formation, evaluation and change in a hospital. It constitutes the foundation of patient safety in everyday practice. To increase and warrant patient safety, most hospitals in the Netherlands use an accredited or certified Safety Management System and implement ten major focus areas.

[www.vmszorg.nl](http://www.vmszorg.nl)

## Mediclabel at the Erasmus MC in a nutshell

- Help preparation of parenteral drugs according to Safety Management System protocols.
- Label medication anywhere with a standard barcode label.
- Increase medication and patient safety by using the GSI Datamatrix.
- Print medication labels on any label printer.
- Implement the double check required by the Health Care Inspectorate.
- Centrally access and manage medication and label data.
- Easily roll out in multiple locations through SaaS technology.
- Centralized, stable, flexible and user-friendly environment.
- 639 users averaging 30,000 labels per month.





*"The possibilities, flexibility and user-friendliness of Mediclabel won us over. We can now work according to a single standard, and follow our Safety Management System's protocols. We do not use color coding anymore, but a GS1 Datamatrix barcode. This eliminates incorrect assumptions and gets us back in control. All activities are fully traceable and introducing barcode scanning helps us to improve medication and patient safety."*

### **Dave Gonlag**

Nurse Anesthetist at the Erasmus MC



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