

Care products with a minimum quality and price

The 29 components of the integrated pharmaceutical care framework are in fact 29 essential products of the pharmacy in the hospital. Each product, with its own minimum quality requirements, cost price and selling price, should therefore demonstrate measurable added value for patients, physicians or managers. In The Netherlands, a draft generic integrated pharmaceutical care framework has been

created. Currently, two indications (oncology and rheumatology) are being used to test the generic pharmaceutical care framework for missing items. Once detailed pharmaceutical care frameworks for these indications have been developed, they will be used as the recommended standards of pharmaceutical care for these indications. These frameworks are being developed in a multidisciplinary team together with inpatient and outpatient pharmacists, specialists, patients and specialist nurses.

The development of this integrated pharmaceutical care framework is an ongoing process. Comments are welcome at b.vandenbemt@maartenskliniek.nl

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The Netherlands: stock production, extemporaneous preparation and reconstitution

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Until the beginning of the 1990s it was not uncommon to produce 30% of the total drug turnover in a Dutch hospital pharmacy. This was mainly for economic reasons.

Today, the perspective has changed; production in the pharmacy is no longer considered to be profitable. Availability and patient safety are the main drivers: when a product is not commercially available or not available in the required dosage form, it can be produced by a hospital pharmacy. But the volume produced has fallen dramatically and due to increasing legal quality standards, production has become a cost centre and no longer a profit centre.

In The Netherlands, it is generally agreed that the good manufacturing practice hospital pharmacy (GMP-H) is the minimum standard for production. The GMP-H is a guide to achieving GMP on any type and level of drugs manufacturing within hospital pharmacy. GMP-H requires investment in staff training, quality systems and facilities. At present, the majority of Dutch hospital pharmacies are 'GMP-H approved'.

In The Netherlands, one hospital pharmacy is only allowed to supply another under the following conditions:

- Commercially unavailable pharmaceuticals
- The supplier has formal GMP status
- There is a product dossier for every product.

So, Dutch hospital pharmacists have a choice: invest in production facilities or stick to extemporaneous preparation only.

At the moment, some relatively large hospital pharmacies have several clients. Expectations are that in the near future stock production will take place in academic centres and a few large regional production centres only. All other hospital pharmacies will limit production to extemporaneous preparation and obtain the other necessary products from the centres.

A new activity is the support of reconstitution on the wards. This process is managed using a practical guideline issued by the Dutch Association of Hospital Pharmacists and the Dutch Association of Nurses. The quality of reconstitution

can be increased by the pharmacy taking over this function, by supplying ready-to-administer drugs in syringes and by training.

The Netherlands has a recently updated textbook titled *Recepteerkunde* with practical information about the design and preparation of medicines in a pharmacy including the care of medicines as a product. In other words, it is about preparation in the broadest sense of the word. The book contains many modern formulations, figures and pictures.

We hope EAHP will support the issue of an international version in English.

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