



NVC Netherlands Packaging Centre is a unique association in the field of packaging. With 14.000 individuals and more than 550 member companies, NVC is leading in information services, education and training and serving the interests of the packaging community

HCPC-NVC Position Paper, October 2011

Packaging may significantly contribute to the improvement of patient adherence in medicine

Introduction

The use of medicine is as old as mankind. Whatever medication is prescribed, it is important that the patient has the will and the possibility to adhere to the prescribed medication. These days, not only the patient and the doctor, but many other actors are involved in the healthcare process. Designing packaged medicinal products in the proper way, may significantly contribute to the improvement of healthcare by stimulating, supporting and enabling an effective adherence of the patient to the medication prescribed. This conclusion was derived at and is supported by a unique Round Table Discussion Forum established by HCPC and supported by NVC. This Forum unites experts from all relevant professional backgrounds, encompassing patient organisations, healthcare providers, pharmaceutical companies, packaging suppliers and scientist in patient adherence and related areas of medicine.

What is packaging?

Packaging is defined by the NVC as the activity of temporarily integrating an external function and a product to enable the use of the product at the point of consumption (POC). Specifically for medicine, the most important functions are ensuring safety, authenticity and accessibility of the active pharmaceutical ingredient in whatever product form (pill, liquid, vapour, etcetera).

What is patient adherence?

The definition of patient adherence is based on the assumption that prescription and treatment are correct, the patient has the basic intention/will to adhere, and that the basic capabilities of the patient are sufficient for self-medication. Adherence to medication is the process by which patients take their medications as prescribed. Adherence has three components: initiation, execution, and discontinuation, as described in "A new taxonomy for describing and defining adherence to medications" that has been written within the framework of the ABC project¹.

Potential for improvement

Data collected by major pharmacy chains indicate that roughly 45% of the population need on-going medication for chronic and/or complex diseases. The figure of patients in the US needing support to stay compliant/adherent/persistent would therefore be some 150 Million and for Europe the relative figure would be in excess of 220 Million people of whom actually 50 % give up their treatment within one year while they are supposed to stay on. According to a compliance monitoring database every day 10% of those who are engaged with their therapy forget to take their medicine. These figures don't take into account the so called primary non compliers, people who get a prescription but never buy it. Furthermore the improper use of medicines in short term therapies, in particular incomplete treatment with antibiotics and the severe consequences of such non adherence needs to be addressed.

¹ "A new taxonomy for describing and defining adherence to medications", B. Vrijens, S. De Geest, D. Hughes, P. Kardas, J. Demonceau, T. Ruppard, F. Dobbels, E. Fargher, V. Morrison, P. Lewek, M. Matyjaszczyk, C. Mshelia, W. Clyne, J.K. Aronson, J. Urquhart, British Journal of Clinical Pharmacology, 2011 (in revision)



The last point of contact between the patient and the healthcare providers is not the dispensing pharmacist but the pharmaceutical packaging. The packaging can represent a huge barrier when the patient/consumer arrives home and opens it, but at the same time packaging may significantly contribute to the improvement of patient adherence in medicine, for instance through communication and the use of intelligent packaging. Concordance is the base for compliance, adherence and persistence. It is therefore essential that patients get positive information about their treatment to achieve the level of understanding of their condition which leads to concordance. This information can be provided by a number of means, packaging being one of them.

Success factors

A number of success factors for using packaging have been identified to improve patient adherence.

- Take point-of-consumption (POC) as starting point for packaging design.
- Apply available and possibly newly developed communicative and behavioural insights into packaging.
- Use packaging to facilitate and stimulate positive feedback loops between patient and healthcare providers.

Actions required

With this position paper we aim to increase awareness of the potential of packaging design to improve healthcare by facilitating better patient adherence. It is important that a number of different parties take action. The pharmaceutical industry should create opportunities by directing basic research funding to innovative packaging concepts. Packaging designers and suppliers play an important role in developing/adapting technologies used in other packaging areas (for instance consumer packaging) to the benefit of healthcare packaging (3% of total packaging market). Healthcare (co)financing organisations should facilitate investigations enabling clear cost-benefit analysis and governmental organisations should facilitate experiments/trials to chart realistic projects.

Who are HCPC and NVC?

HCPC Europe is an "association internationale à but non lucratif" (a not for profit organisation) under the provision of the Belgian Law, registered in Brussels. The founders and members of HCPC Europe believe that the packaging of medicines can in itself play a significant part in patient compliance and that, by organising as a body, HCPC Europe can be effective in promoting packaging-related initiatives which will help improve patient compliance. The mission of HCPC Europe is to assist and to educate the healthcare sector in the improvement of patient compliance through the use of packaging solutions. The goal of HCPC Europe is to achieve demonstrable improvement in patient compliance through the implementation of packaging-related initiatives.

NVC Netherlands Packaging Centre is a unique association in the field of packaging. With 14.000 individuals and more than 550 member companies throughout the supply chain of packaged products from retailers up to raw material manufacturers, NVC is leading in information services, education and training and serving the interests of the packaging community. This includes a number of activities in the field of pharmaceutical packaging innovation, like the ΦΠI-project and participation in the Innopack exhibition with a seminar programme.

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