

Patient Adherence to Therapies - The Keys to Sustainability of Future Healthcare Systems

Thomas Dries, Ph.D., Chairman of HCPC Europe

Today and for the foreseeable future, it is a challenge to provide patients in Europe with state-of-the-art medicines while containing total healthcare costs. Tools such as compliance-enhanced unit dose packaging will contribute to the effectiveness and overall sustainability of future drug therapies.

The Modern Dilemma of the Western World:

Over the next few decades most European countries will undergo a large demographical transformation induced by the retirement of the baby boomers and the probability of significant increases in their life expectancy. With life expectancy rising at the same time that birth rates are falling, most EU countries are facing the following fundamental dilemma:

In future there will be a very large number of elderly with far fewer young people working to support them and maintain their standards of living.

The dilemma has already started to affect every long-term programme -- from health care and education to pension plans and military spending -- that requires public funds

For healthcare systems the consequences are obvious:

Aging populations tend to be in greater need of health and long-term care while the pressures to contain healthcare costs will significantly increase; it is difficult to envisage how the working generation will be able to sustain the increased financial burden.

Here the US significantly differs from the EU. As in the EU, the wave of retiring baby boomers will start to hit the US by 2010, as well. However, the implications for the US will be most likely less severe due to the fact that US birth rates consistently outperformed those of all EU countries during recent decades.

On November 8th 2005 the OECD published an important study on the healthcare situation in all 30 OECD member states (ref. 1). Some highlights relevant here are summarized below:

1. Health status has improved dramatically over recent decades.
2. The average length of stay in hospitals (ALOS) has continued to decline in nearly all countries for important conditions.
3. Health costs have also risen over time and are putting pressure on public budgets. In most countries health expenditure increased at a faster rate than overall economic growth
4. A perceived shortage of physicians is an important concern in many countries. There are also reports of current nurse shortages in all but a few OECD countries.

5. A rapid rise in drug spending in recent years – more than 5% per year growth on average since 1997 – has been an important driver in the overall rise in total health spending.
6. The diffusion of modern medical technologies is one of the main drivers of rising health expenditures across OECD countries.
7. A greater focus on prevention might provide opportunities to further improve health while reducing pressure on health care systems.

Ways to Overcome the Dilemma:

As the OECD study prefers to speak about costs rather than focusing more on the values medical treatments provide, we have to clearly state here:

New treatments and healthcare products and devices resulting from novel technologies made, are making and will make growing contributions to public health. This is demonstrated by increased life expectancy, greater quality of life, shorter stays in hospitals, lower rates of disability and less absenteeism. Technological advances in medicines proved to be worth far more than their costs, in the past. This will hold in future, as well.

However, considering the severely lopsided age distribution in the Western World it is vital that we take out costs in healthcare on a sustainable basis, if we do not want to give up on the benefits of state-of-the-art medicines and medical treatment provisions, in future.

It is nonsensical to consider reducing the number of drug doses or to stop employing new technologies in diagnosis, in future.

In order to take out costs we as patients or future patients have to:

1. stop bad habits and unhealthy behaviours now
2. participate in disease prevention programs, actively

and last but not least

3. stay adherent and persistent with the prescribed drug therapies

Data from the FDA show that about one third of patients fail to take their prescribed medications. Parental non-compliance with the drug therapies prescribed for their children exceeds 50 percent, and non-compliance in the elderly ranges from 26 to 59 percent (ref. 2). Equivalent data for the EU is not available at present but it is fair to assume that the EU issue is of similar magnitude.

Whether we live in the US or in the EU we all need to understand, that these figures are unacceptable and cannot be allowed to persist. It is a fundamental issue to increase the rate of successful therapies in real life via better patient compliance and persistence.

It is crucial, that we find tangible answers to the following question:

How can we increase adherence levels in future therapies under the boundary conditions, that

- a) the service time windows offered by physicians and nurses will decline
- b) the proportion of the elderly in future societies will grow

From a patient perspective it means getting better informed, acting more responsibility in pre- and post disease stages. This involves finding various other support channels such as pharmacists, patient groups or disease-management organizations.

From an industry perspective, it means:

A multi-channel approach on many disciplines on various levels is necessary. In the context of this magazine I am only focusing on companies engaged in drug manufacturing and drug packaging.

As consumers we know, when it comes to packaging, convenience and ease of use are key to satisfaction and brand-loyalty.

Packaging and pharmaceutical companies have to work together closely in order to build the momentum necessary for future packaging-related improvements in patient adherence and persistence.

It is essential to focus on the patients' needs in their various age groups and disease segments. To speak to and understand patients, gather statistical relevant data on their experiences with packaging designs is a first but very important step, if the industry does not want to go a self-oriented path with poor outcomes and high total costs.

Therefore, HCPC Europe, a not-for-profit organization with members representing companies, who are in the value chain of drug manufacturing and packaging sponsored two initiatives to assess

1. Packaging preferences of elderly out-patients of age 70 and above.
2. Packaging acceptance levels of EU patients of all age groups, who refilled a prescription.

Study #1 was performed by Prof. Dr. Schoberberger at the University of Vienna on 100 people, who have to take 3.02 oral solids medicines per day, on average. About 43% have to take 5 or more different medicines a day. These patients were given the full range of standard packaging available in the Austrian market (standard blister and glass bottles) as well as new types of packaging as they are used in the US, such as CR-bottles (HDPE, not available in Austria) as well as CR-blister and advanced wallet packs. A striking result was that the highest preference was given to glass-bottles with simple screw tabs and to simple thermoform blisters. Both blister and bottle formats with CR features were rated as

compliant-adverse. The results are due to be published.

Study #2 (ref. 3) was performed by a pharmacy in the town of Ingelheim /Germany based on 222 patients (all age groups), who refilled their prescribed medicine. They were asked 7 questions by the pharmacist related to drug packaging. A high satisfaction level of unit dose blister packaging and a high appreciation level of packaging-formats with compliance enhancing features was reported by those, who are aware of or who encountered compliance-enhancing features, in the past.

As mentioned above, these studies are only the beginning of a process which will in future lead to more profound recommendations for packaging features, which enhance both patient safety and compliance levels.

From a European perspective it is about doing the basics right on a drug pack, which includes:

- a) Introducing proper colour coding to ease identification
- b) Introducing proper font sizes to ease readability
- c) Providing clear instructions on how to use the drug
- d) Introducing visible elements such as colour coding to guide patients through more complex regimens.

More than 12% of all 1625 German trade-packs of the top 35 global pharmaceutical companies already exhibit these features.

It is a rewarding goal to try and increase that rate.

References:

1: Health at a Glance: OECD Indicators 2005; ISBN 92-64-01262-1

2: 60 *Fed. Reg.* 44,182, 44,286 (Aug. 24, 1995)

3: Please refer to www.hcpc-europe.org (News&Events)