

Blister packaging for drugs in nursing homes: Much discussed, but hardly investigated

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In blister packaging, a pharmacy (or a service provider commissioned by it) portions and packs the prescribed drugs of a patient according to

weekdays and times of day, sorted into individual transparent packages (blisters). In this way, one can see at a glance when tablets should be taken and whether all tablets have been taken as planned.

For some years now, there has been a broad and controversial debate in Germany as to whether increased blister packaging for nursing [home residents](#) is suitable for relieving the burden on the long-term care system and sustainably improving the care of nursing home residents. The German Federal Ministry of Health therefore commissioned the Institute for Quality and Efficiency in Health Care (IQWiG) to examine, among other things, findings from studies. The report is now available.

According to IQWiG's search for evidence, studies on patient-specific blister packaging have so far been predominantly conducted for the outpatient sector, also internationally. However, as far as blister packaging for nursing homes is concerned, hardly any robust data from studies are available. Even the common arguments put forward by various stakeholders and interest groups for or against more blister packaging in nursing homes are not scientifically proven. This also applies to the aspect of cost-effectiveness.

Possible advantages and disadvantages

In the opinion of its advocates, the fact that medication errors will occur less frequently with blister packaging supports the introduction of this method. Because the more illnesses a resident suffers from, the more complex [drug](#) therapy becomes. In addition, if nursing staff were relieved of the burden of organizing the administration of drugs, they would have more time to care for the individual patient. And this in turn could increase job satisfaction in nursing and make the profession more attractive for young people.

Critics, however, fear a loss of competence if tasks are increasingly

shifted from nurses to other professional groups. Moreover, patients might also lose some of their autonomy because they would be even less able to recognize and decide which drugs to take and which not. Critics also point out that not all drugs are "blisterable." This could even complicate the administration of drugs for nursing staff in nursing homes, as they would have to remember a second distribution of drugs in addition to the tablets in the blisters.

Initially, blister packaging causes additional costs. However, these should at least in part be compensated if wastage is reduced. The fact that not every patient receives a full package, but only individual tablets in the blister, means that overall, fewer tablets are thrown away.

Studies examine blister packaging in the outpatient sector

The IQWiG researchers found a number of studies that investigated aspects of the benefit of blister packaging, but they all referred to an outpatient setting; however, such studies can hardly be transferred to residential settings. This holds especially because people who live at home should still be able to handle their medication themselves. No study investigated residential geriatric long-term care.

The studies originating from Germany are mainly before-and-after comparisons without a control group, which were evaluated in model projects by health insurance funds. However, the results of such studies are not very meaningful from a scientific point of view—both with regard to the benefit for nursing [home](#) residents (symptoms, state of health, side effects of medication, etc.) and for the nursing staff (professional competence, work-related quality of life, etc.). IQWiG concludes that the benefit and harm of blister packaging in nursing homes therefore remain unclear.

Statements on cost-effectiveness can only be made by means of estimation

The evidence on the cost-effectiveness of blister packaging for nursing homes is also insufficient, but the Institute was able to estimate possible effects based on various sources. IQWiG assumed that a weekly blister costs about €3 and that drug expenditure will decrease by 4.1% due to less waste. If at least €73.17 of costs for blistered drugs are incurred per week and resident, blister packaging would be cost-neutral. This, however, refers only to drug costs. Due to a lack of data, it is not possible to consider other monetary effects (e.g. due to fewer hospital referrals).

Statements on non-monetary effects are also uncertain: Assuming that about half to two thirds of the approximately 818,000 people needing full residential nursing care in Germany receive blister-packed drugs, the time savings for nursing staff would amount to about 22 to 51 minutes per month and resident.

Great need for research: IQWiG proposes a design for a new study

The Institute has identified a great need for research on blister packaging in [nursing homes](#). Thomas Kaiser, Head of the IQWiG's Drug Assessment Department, notes: "The discrepancy between the broad and sometimes vehement debate about blister packaging on the one hand and the lack of evidence on the other surprised us. Individual stakeholders and interest groups passionately argue for or against blister [packaging](#), without being able to scientifically support their pros or cons. It is good that the commission from the Ministry of Health has now disclosed this." Against this background, IQWiG developed the design for a future study and integrated it into the report. Thomas Kaiser affirms: "Our research

has shown that high-quality studies are indeed available on other research questions in residential long-term care and that such studies are evidently feasible."

Process of report production

In June 2018 the German Ministry of Health commissioned IQWiG to prepare the report as a rapid report in an accelerated procedure. Interim products were thus not published and did not undergo a hearing. The present rapid report was sent to the Ministry on 29 March 2019.

An English-language extract of the report will be available soon; if you would like to be informed when it is published, please send an email to info@iqwig.de.

More information: [www.iqwig.de/en/projects-resul ... pid-report.9561.html](http://www.iqwig.de/en/projects-resul...pid-report.9561.html)

Provided by Institute for Quality and Efficiency in Health Care

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