

DEVELOPMENT OF REIMBURSEMENT OF NEW EXAMINATION AND TREATMENT METHODS (NUB) IN THE GERMAN DRG-SYSTEM

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Objectives

Reimbursement of inpatient services in Germany is based on Diagnosis Related Groups (G-DRG). For new examination and treatment methods (NUB) which are not covered appropriately by G-DRG an additional NUB remuneration is possible. Aim of the NUB proceeding is the funding of new innovative methods provided in the inpatient setting. Hospitals have to apply for reimbursement for each new method at the 'Institute for the Payment System in Hospitals' (InEK), which decides whether NUB extra-remuneration is possible (status 1) or not (status 2-4). This paper analyses the development of NUB remunerations and their effects on stimulating medical advancement and innovation.

Methods

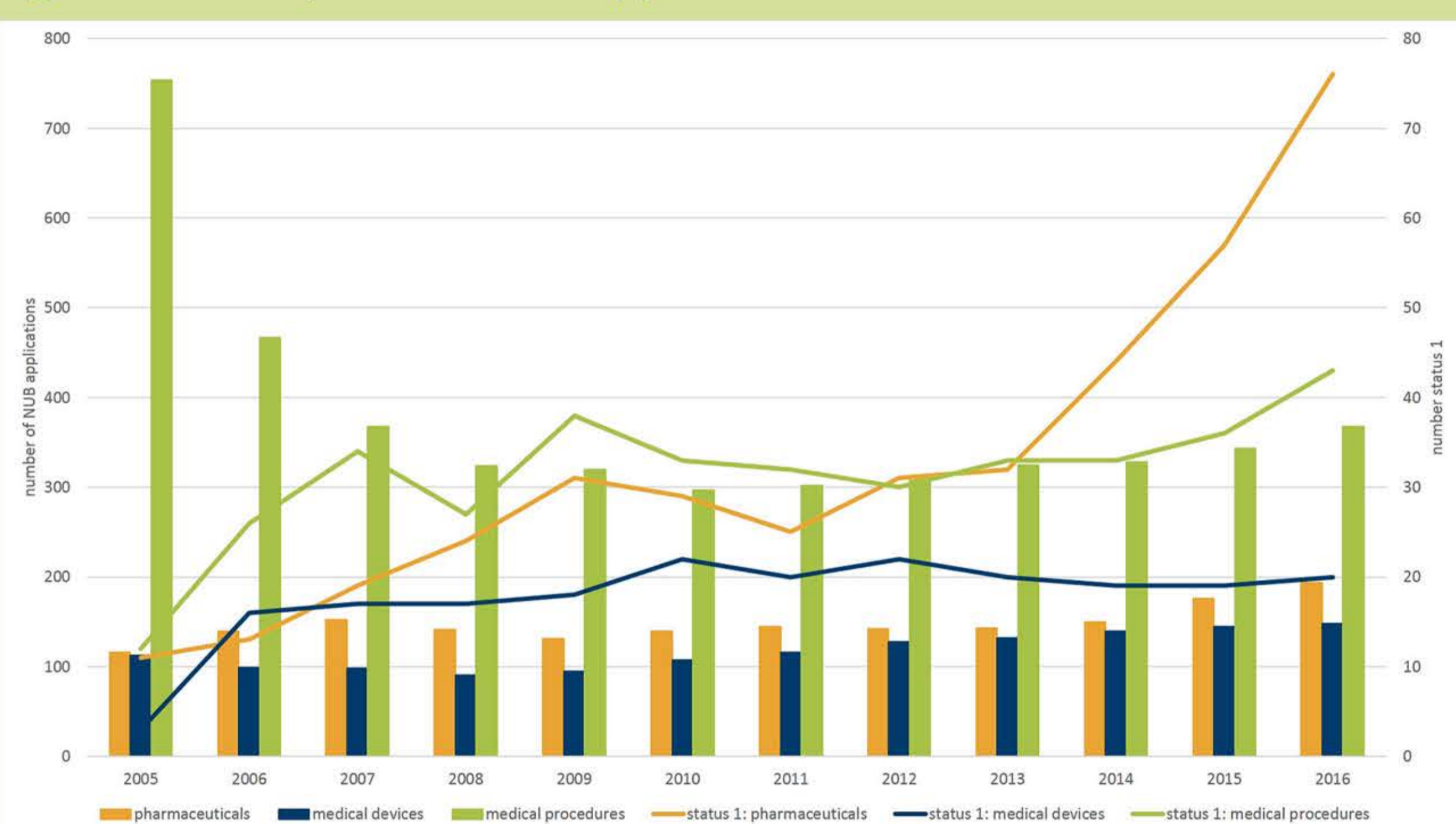
Based on the annually published data of paragraph 6 section 2 of the Hospital Reimbursement Act (German: § 6 Abs. 2 KHEntgG) including name of the method, number of hospitals per method and status) an analysis on the distribution of NUB status from implementation in 2005 through 2016 was conducted. Applications for the same method were pooled to enable tracking of the annual developments. Parameters of analysis were NUB status, number of inquiring hospitals, and NUB type differentiated by medical procedures, pharmaceuticals, or medical devices. Additionally, the conversion into G-DRG or additional fees was examined.

status 1*: InEK criteria fulfilled, hospital reimbursement based on individual agreement possible
status 2**: criteria not satisfying, no remuneration possible
status 3: NUB application not been fully processed (only applied in 2005)
status 4: submitted data were incomplete or implausible * incl. 1 resp. 2 and 1 resp. 4 ** incl. 2 resp. 4

Results

Strong distinctions between pharmaceuticals, medical devices and procedures

Figure 1: Development of NUB applications and status 1



Annually German publicly funded hospitals are allowed to submit applications for new examination and treatment methods which are (from hospitals' point of view) not appropriately compensated by the G-DRG system. Since implementation overall 186,399 individual NUB applications were submitted to InEK. This figure compiles from 3,028 methods divided into pharmaceuticals, medical devices and procedures. Figure 1 illustrates the annual development of NUB applications and the number of methods assessed with status 1, differentiated by the types given above.

Pharmaceuticals: Number of NUB applications increased (2005-2016: 67%) and mainly allotted to status 1.

Medical devices: Applications increased since NUB implementation (2005-2016: 31%), nevertheless percentage of status 1 is significantly lower than for pharmaceuticals.

Medical procedures: After an initial ascent at the beginning of the NUB proceeding the number of applications for medical procedures levels off at about 350. The number of positive decisions (status 1) is low (2016: 14%) as compared to pharmaceuticals and medical devices.

Reasons for this differential developments could be different innovation cycles, cost factors, difficulties in application preparation, and argumentation etc. and should be further investigated. It has to be taken into account that in the refund financing system investment costs are not covered by G-DRG remuneration.

Persistence of NUB and incorporation into the G-DRG catalogue

Figure 2: Persistence of NUB applications allotted to status 1

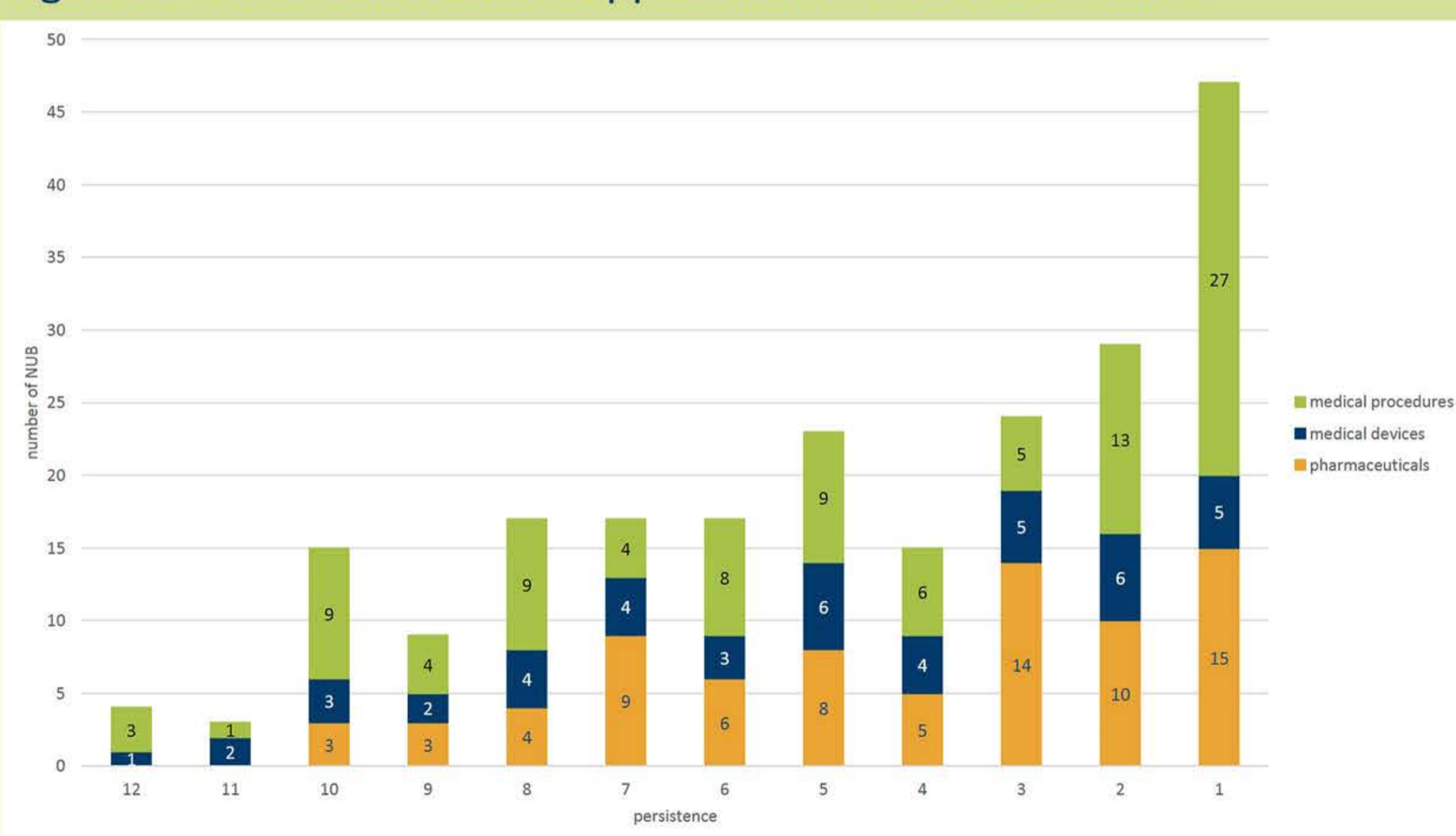
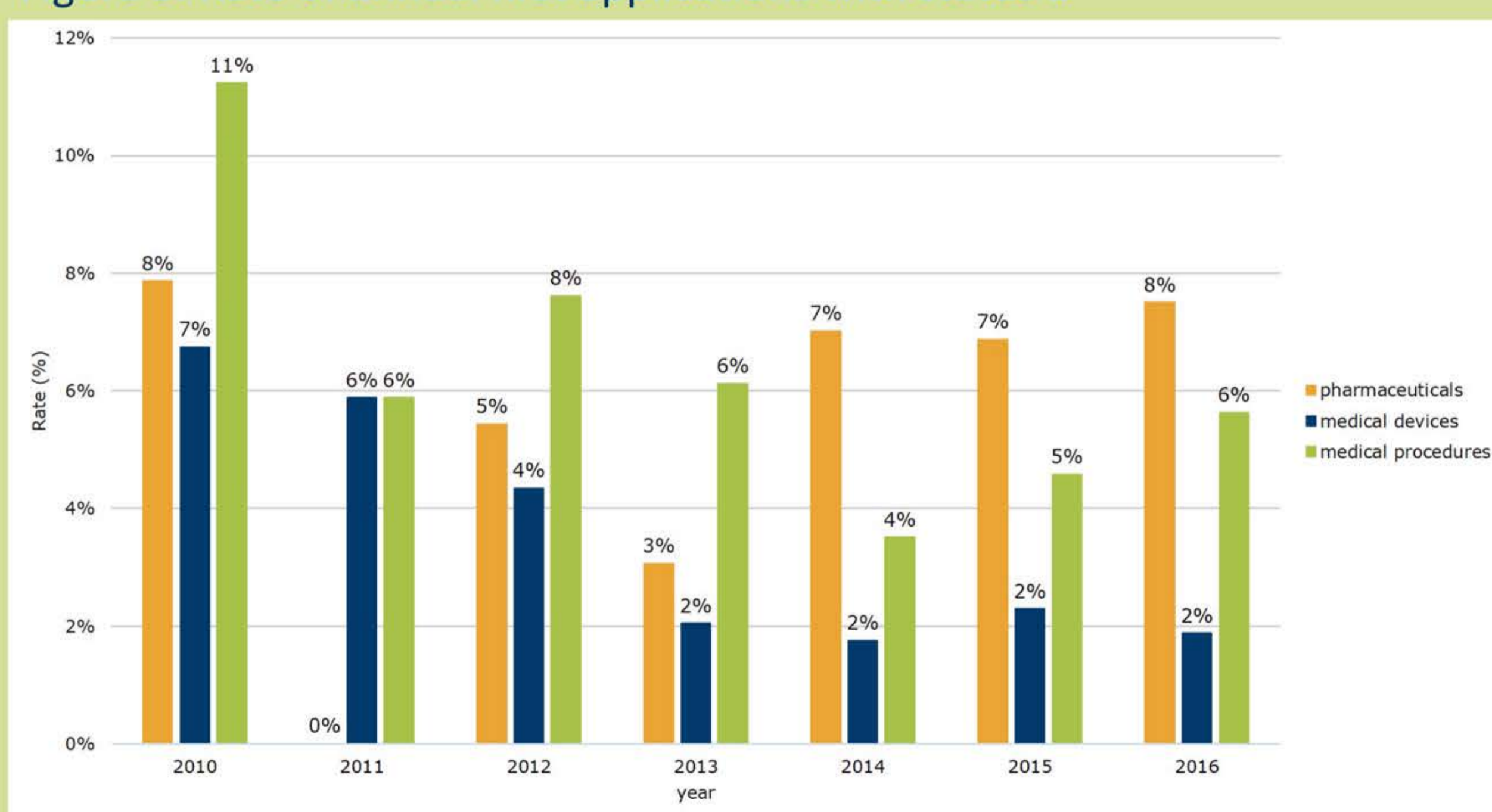


Figure 3: Rate of annual first applications with status 1



Due to the fact, that NUB decisions are only valid for one year, numerous NUB are resubmitted for several years. In detail, four methods have been resubmitted every year since 2005 and annually allotted to status 1 till now. This results from the fact that no incorporation into the G-DRG catalogue took place. Figure 2 illustrates the persistence of NUB applications with status 1 since 2005. A transition into a regular additional fee within the G-DRG system was carried out only in 58 cases: 37 pharmaceuticals, 7 medical devices and 14 medical procedures. Furthermore, 9 full G-DRG were implemented based on NUB applications (3 medical devices, 6 medical procedures).

A further aspect analyzed here is the annual amount of NUB which are applied for the first time. Since 2010 the total percentage of first applications decreased. Only pharmaceutical NUB increased, probably because of their high cost discriminative character. Figure 3 illustrates the percentage of new applications with status 1 from 2010 to 2016. Contrary to pharmaceuticals, medical devices are less represented and rarer allocated with status 1. An essential point is that only a marginal rate of NUB with status 1 was submitted for the first time: In 2016 121 NUB with status 1 had the same status as in 2015 and 39 NUB were effectively "new" status 1. Of these 24 were first-time applications and in 15 cases the status changed between 2015 and 2016 from 2 to 1 (8) or 4 to 1 (7).

Conclusions

Main reason for the implementation of the NUB system was to promote and enable remuneration of innovations in German hospitals. After a very high number of NUB applications in the beginning (2005) their quantity decreased and from vantage point of the present now level off at about 700 applications per year. Especially NUB applications for pharmaceuticals have a high proportion and are often accorded with status 1. There are several deficiencies which lead to a lack of transparency regarding the NUB proceeding: the NUB applications are not public, so the argumentation of hospitals is unknown and the status assignments (1 to 4) presented by the InEK are given without any further rationales. Furthermore, it is unclear when and for what reasons NUB remunerations transmit into additional fees or G-DRG. Those aspects should be investigated in further analysis. Regarding the innovation capabilities of the German health care system the current configuration of the NUB remuneration is not fostering leading-edge technologies in inpatient services sufficiently. Especially medical products remain on a low level of positive assessment, despite increasing NUB applications and technological progress.