Why do health care professionals still prescribe non-selective β-blockers in patients with asthma or COPD?

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**Background** Prevailing guidelines advise to avoid the use of non-selective (ns) β-blockers in patients with asthma or COPD. Despite this contra-indication, community pharmacies in the Netherlands dispensed ns-β-blockers monthly on average to 10 patients with inhalation medication.

**Purpose** To assess whether prescribers initiating ns-β-blocker were aware of asthma or COPD comorbidity and if so, to explore reasons of prescribers and pharmacists to disregard the recommendation from the guidelines.

**Method** An exploratory study was performed in 53 community pharmacies in the Netherlands between February and July 2016. Participating pharmacists were asked to select patients with actual use of as well inhalation medication as β-blockers from their pharmacy records. Subsequently they were to identify the initial prescriber of the ns-β-blocker and to interview three prescribers, preferably different medical specialists, about their awareness of the contra-indication and their choice to nevertheless initiate the ns-β-blocker in these patients. Finally they were asked for their reasons of this co-dispensing.

**Findings** 827 patients were identified for using ns-β-blockers with inhalation therapy. From these, 153 ns-β-blocker initiators were interviewed (64 general practitioners (GP?s), 45 ophthalmologists, 24 cardiologists and 20 other prescribers). 107 prescribers (70%) indicated to have been aware of the contra-indication at ns-β-blocker initiation. From these, 40 (37%) prescribers did not consider the contra-indication to be relevant. 23 (21%) prescribers stated that the patient already tried alternative medication and 23 (21%) prescribers explained that there was no alternative medication available in their opinion. 46 (42%) prescribers mentioned not to have been aware of the contra-indication at the moment of the first prescription of the ns-β-blocker. Of those, 15 (33%) doctors replied that they would have chosen an alternative medication if they had known about the presence of the lung disease. Pharmacists mentioned that the pharmacy information system did not signalize this contra-indication automatically in all cases. If a computerized signal was generated in 84 (56%) of the 151 cases the patient was informed about the possibility of limited airflow.

**Conclusion** About two thirds of the interviewed doctors initiating ns-β-blockers in long patients were aware of this contra-indication. Reasons named were the lack of an alternative and regarding this contra-indication as not relevant. Further research is needed to evaluate whether these considerations are legitimate. Some ns-β-blockers initiators would have reconsidered this choice when having been aware of the co-morbidity. There seems to be a role for pharmacists to signalize this contra-indication more actively to prescribers of ns-β-blockers in patients with lung diseases.