

# Education and professional development-an international survey

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**Background** Pharmaceutical practice has experienced a rapid transition towards patient-centered care during the past decades. Whereas pharmacists in some countries have achieved a fruitful professional change, others are still stuck in mere dispensing. Besides barriers in professional development, specific national causes seem to determine the pace of progress.

**Purpose** The study aim was to investigate the current status of professional development in different countries of the world. Results might help to detect deficiencies that need to be addressed for further development.

**Method** This qualitative study was conducted as an expert survey. The World Health Organization's (WHO) Framework for action on interprofessional education and collaborative practice was considered in identifying fields of examination. Outstanding experts from countries all over the world were asked to participate in this study and to complete a survey on pharmaceutical development regarding practice, education and research. Results are summarized and shown descriptively.

**Findings** Preliminary results, restricted to national pharmacy education, are shown. The survey was filled by experts from 12 out of 14 requested countries from 4 continents. University curricula vary between 4 years (Australia, Bosnia/Herzegovina and Germany) and 6 years (Canada, Japan, the Netherlands, Thailand and US). Most countries require a residency before licensure, further specialization is usually voluntarily. University curricula remained drug-oriented only in Austria, Bosnia/Herzegovina and Germany; these are as well the three countries with the shortest teaching of pharmacotherapy (plus Kosovo), without any consideration of patient counselling and without training on the ward (plus Belgium and Kosovo). Some countries are currently at a stage of transition. Experts' statements on Austria, Bosnia/Herzegovina, Germany and Kosovo state little progress in implementing changes in pharmaceutical practice, whereas Canada and US are leading the field. Pharmaceutical boards of all countries however have realized the changing times.

**Conclusion** The immense discrepancy in professional development between the studied nations is reflected by educational parameters. Implementation of cognitive pharmaceutical services correlated to the length and orientation of the curricula. Education is stated by the WHO as the first step towards professional change. Our findings support this thesis, as improved curricula were linked to greater changes. Coauthors: Hartmut Derendorf, Kenji Fujita, Janice Geers, Alexander Hartl, Kreshnik Hoti, Ines Krass, Markus Messerli, Emina Obarcanin, Pornchanok Srimongkon, Martina Teichert, Ross T. Tsuyuki