

EVALUATION OF INFORMATION CONTENT AND CHARACTERISTICS OF PUBLICLY AVAILABLE DRUG SHORTAGE INFORMATION SOURCES

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BACKGROUND AND PURPOSE

As drug shortages continue to pose an international problem almost every country has implemented a shortage information source in a form of a catalogue or database system. Our aim was to assess the information content and characteristics of publicly available shortage databases with key emphasis on the signaling function (collection mechanism, source of data and the frequency of update).

METHODS

6 European and 4 oversea (North-America and Australia) online drug shortage information sources were evaluated regarding:

1. Product information (e.g.: name, unit size, ID No., ATC code)
2. Shortage information (e.g.: Duration, Reason, Recommendation)
3. Database structure (e.g.: language, status, OTC/POM, owner, signaling function)

RESULTS

The results are represented in Graph 1., where the percentage represents the number of databases containing the analyzed information comparing to the total number of databases (N=10). It can be observed that majority of the shortage information sources give comprehensive information about the affected product and the shortage event (duration, reason, recommendations). Only two evaluated parameters, the unit size (50%) and the therapeutic categorization (20%) is underrepresented comparing to other parameters. Main differences can be identified when examining the signaling structure elements (the collection and representation of information, references and shortage status). In Table I. the signaling function characteristics are shown in percentage (number of represented parameter in the percentage of the total number of parameters evaluated (n=5)). Only two databases have a historical representation of the gathered data and 40% represents the references. Merely half of the information sources are using status classification. The FDA database is completely (100%) suitable for a signaling function as it contains all the parameters that can help to assess the timeframe, background and tendencies of drug supply issues.



Graph 1.: Product and shortage information characteristics of databases

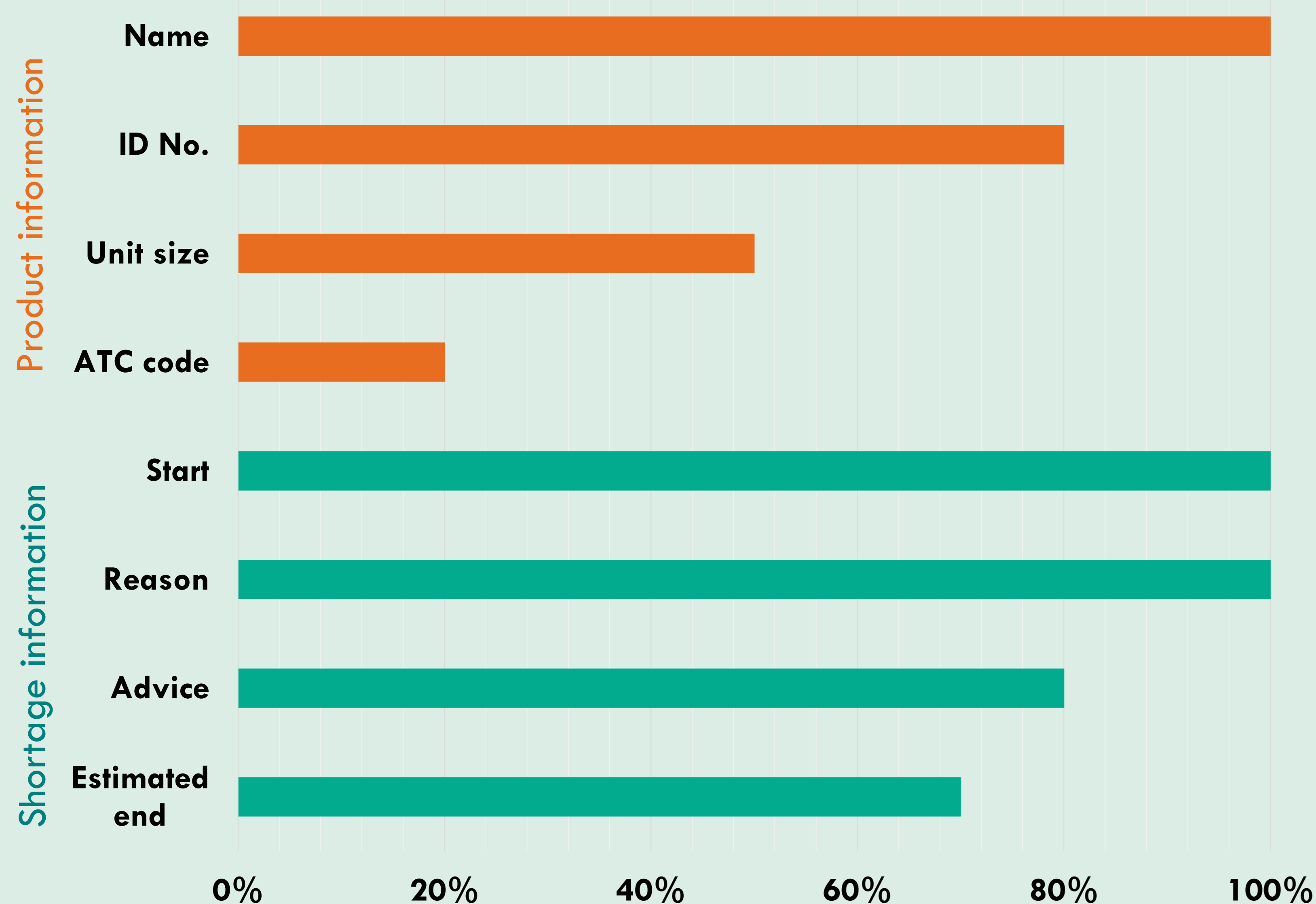


Table I.: Database signaling function analysis

COUNTRIES	EVALUATED PARAMETERS – SIGNALING FUNCTION					Shortage status (e.g.: current or resolved) classification	% (n=5)
	Source of information presented	References presented	Historical representation of information	Controlled collection of information			
HUN	1	0	0	1	0	0	40%
EU (EMA)	0	0	0	1	Ongoing/Resolved	0	40%
NL	1	1	0	1	0	0	60%
DE	1	1	0	1	0	0	60%
FR	1	0	0	1	0	0	40%
IT	0	0	0	1	0	0	20%
CA	1	0	0	1	Recent/Resolved	0	60%
USA (FDA)	1	1	1	1	Currently in shortage/Resolved	0	100%
USA (ASHP)	0	1	1	1	Current/Resolve	0	80%
AU	1	0	0	1	Current/Resolved/Discontinued	0	60%
% (N=10)	70%	40%	20%	100%	50%		

CONCLUSION

The national drug shortage databases show a high degree of diversity in information content and structure. A standardized reporting system is advisable at an international, national and institutional level. The required and presented information may vary regarding the location and level of health service provision, but the inclusion of product identification information, duration (beginning and estimated end) and comprehensive signaling function is highly recommended to the efficient management of supply disruptions.

