

# PHARMACISTS COMPETENCE TO RESOLVE THE THERAPEUTIC CHALLENGE OF THE VALSARTAN SAGA

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## INTRODUCTION

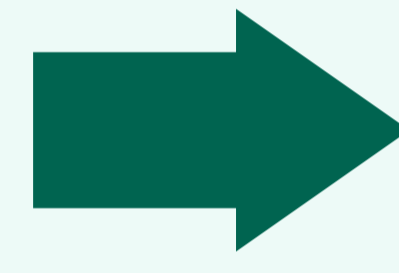
In an evolving healthcare system, continuing professional development and education should reflect timely topics to enhance and improve professional skills<sup>1</sup>. A safety alert by the European Medicines Agency triggered a recall of potentially contaminated valsartan medicines with the genotoxic impurity, N-nitrosodimethylamine (NDMA)<sup>2</sup>.

## AIMS

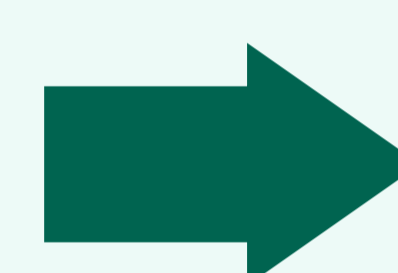
To investigate the use of an innovative tool, the Mentimeter in assessing the competence of pharmacists in addressing the risks versus benefits associated with the use of valsartan medicines potentially contaminated with NDMA.

## METHOD

A symposium was organised to evaluate the competence of the pharmacists in the application of scientific knowledge to the therapeutic challenges in the valsartan saga.



A concise 32 slide interactive presentation with 9 questions was prepared after a literature search of valsartan-related peer-reviewed articles and scientific documents was conducted.



The Mentimeter was used as a tool to ask and record the responses given by the pharmacists in the interactive discussion.

## RESULTS

26 pharmacists (16 females, 10 males; age 22 to 45) from different pharmaceutical work backgrounds (10 hospital, 12 community, 4 industrial pharmacists) participated in the symposium. Table 1 presents the outcome of the correct positive responses obtained interactively by the Mentimeter. The results show that pharmacists can benefit from educational interventions to enhance their knowledge and competence in certain areas such as in the pharmacokinetics and the clinical relevance of angiotensin-receptor antagonists and the threshold for toxicological concern of NDMA impurities.

Table 1: The number of correct positive responses to the statements presented

Number of pharmacists agreeing with the statements presented	Statement
18 (60%)	NDMA is a probable human carcinogen found to cause cancer in animals
22 (84%)	Not all sartans contain a tetrazole ring
20 (77%)	The formation of NDMA occurred during the synthesis of valsartan
20 (77%)	NDMA is unlikely to bioaccumulate
7 (27%)	The half-life of valsartan is 6 hours
6 (24%)	1.5mcg/day is the tolerated limit for daily exposure to NDMA
24 (88%)	Drinking water, ham, bacon and cigarettes are contaminated with NDMA
20 (77%)	Advised that valsartan should not be stopped abruptly until alternative treatment is available
24 (92%)	Would recommend switching patients to another sartan as early as possible

## CONCLUSION

It is concluded that the Mentimeter is a useful innovative tool to enhance the learning experience. Pharmacists can benefit from added value continuous professional development and education to enhance their scientific knowledge and competencies to deal with evolving healthcare issues.

## REFERENCES

<sup>1</sup> Wise EH, Sturm CA, Nutt RL, Rodolfa E, Schaffer JB, Webb C. Life-long learning for psychologists: Current status and a vision for the future. *Professional Psychology: Research and Practice*. 2010; 41:288-297.

<sup>2</sup> Pottegard A, Kristensen KB, Ernst MT, Johansen NB, Quartarolo P, Hallas J. Use of N-nitrosodimethylamine (NDMA) contaminated valsartan products and the risk of cancer: Danish nationwide cohort study. *BMJ*. 2018; 362: k3851.