Artery Research
Vol. **25**(**S1**); 2019, *p.* S70
DOI: https://doi.org/10.2991/artres.k.191224.061; ISSN 1872-9312; eISSN 1876-4401
https://www.atlantis-press.com/journals/artres

P27 Non-validated Blood Pressure Devices Dominate the Online Marketplace: An Initiative of the Lancet Commission on Hypertension Group

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ABSTRACT

Introduction: Home BP monitoring is recommended to guide clinical decisions on hypertension and is used worldwide. People make their own decisions when purchasing BP measurement devices, which are often made online. One potential barrier to accurate home BP monitoring is that patients may purchase an unvalidated device (one that has not been proven accurate according to an internationally sanctioned protocol). This study aimed to evaluate the number, type, percentage validated and cost of home BP devices available online.

Methods: A systematic search of online businesses selling BP devices that may be used for home BP monitoring was conducted. Multinational companies make international deliveries, so searches were restricted to BP devices available for one nation (Australia) as an example of device availability through the globally connected online marketplace. Validation status of BP devices was determined according to established protocols.

Results: 59 online businesses, selling 972 unique BP devices were identified. These included 278 upper-arm cuff devices (18.3% validated), 162 wrist-cuff devices (8.0% validated) and 532 wrist-band wearables (0% validated). Most BP devices (92.4%) were stocked by international 'e-commerce' businesses (e.g. eBay, Amazon), but only 5.5% of these were validated. Validated cuff BP devices were more expensive than non-validated devices: median (interquartile range) of 101.14 (75.00 to 151.50; versus 67.37 (30.40 to 112.83) AUD, $p < 0.0001$.

Conclusion: Non-validated BP devices dominate the online marketplace and are sold at lower cost than validated devices. The widespread use of non-validated BP devices is a barrier to accurate home BP monitoring and must be urgently addressed.