Building a personalised nutrition intervention platform: lessons from the Food4Me Study

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Improving lifestyle behaviours (diet and physical activity) has considerable potential for reducing the global burden of non-communicable diseases, promoting better health across the life-course and increasing well-being. However, realising this potential will require the development, testing and implementation of much more effective behaviour change interventions than are used conventionally (Celis-Morales et al., 2015a). The Food4Me intervention study was designed as “proof of principle” to test the hypothesis that implementing a more personalised approach (personalised nutrition (PN)) would be more effective and lead to bigger, and more appropriate dietary changes (Celis-Morales et al., 2015b).

PN is predicated on knowledge of key characteristics of those to whom the intervention is being delivered. The more tailored the intervention is, the more sophisticated, and potentially expensive, will be the process for acquiring, analysing and acting upon those participant characteristics. In addition, if interventions are to improve public health significantly, they need to be scalable and to reach large numbers of participants cost effectively. Consequently, the Food4Me intervention study was designed to be delivered via the internet and this allowed us to run the study simultaneously in 7 European countries. This approach meant that we did not need to meet participants face-to-face. Participants uploaded their data via the web which facilitated data analysis and the delivery of personalised advice in a consistent manner. In addition, participants collected biological samples (buccal cells and blood) themselves. This internet-based approach raised questions about data integrity and participant identify which we addressed through an embedded validation study (Celis-Morales et al., 2015c). Compliance with the study protocol was good and the web-based approach was attractive to adults across the life-course.