

## Better compliance through better medical devices

Dan Jenkins & Chris Langley for more information please contact dan.jenkins@dca-design.com

50% of patients around the globe with long term health issues do not take drugs as prescribed

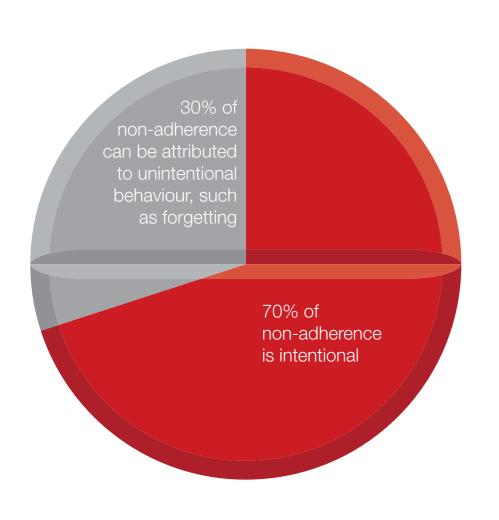
By US estimate this equates to:

13%
Healthcare expenditure

125,000 deaths per year 10% of hospital admissions

\$290 Billion

60% of over 65s in the US take 5 or more





Reminders alone will not solve the problem

Information alone
will not solve the problem
patient engagement
& understanding
is critical



40% of elderly patients do not know the purpose of their medication 80% do not know of the consequences of



Around half of patients take their drugs as prescribed. The reasons for this are multifaceted, thus a systemic view is required exploring opportunities across the patient journey, shaping the knowledge, skills and attitudes of the patient and stakeholders. Viewed systemically, it can be tempting to focus limited resources on perceived quick-wins, such as training and SOPs. Products are often overlooked as being costly and difficult to change. This paper explores the role device design can play in shaping adherence levels.

Unintentional non-adherence is perhaps the easiest to tackle because it does not involve changing user's attitudes or mental models, rather it simply requires some level of memory augmentation, such as a prompt to take a drug along with a mechanism for recording that the drug has been taken. The simplicity of the implementation is, conceivably, the reason why this is the challenge that is tackled most often in device design.

For some patients, these reminders may be all that is needed to remedy the non-adherence challenge; however, for many, non-adherence is a conscious choice. Some estimates are that it accounts for around 70% of the issue.

One approach to improving adherence is to increase the level engagement that the patient has with the therapy. The challenge of patient engagement can be considered in two ways, first gaining engagement and then maintaining it.

The design of medical devices has a clear role to play in improving patient compliance. Unlike training and written instructions for use, the device is a consistent 'touch point'. Thus it has the potential to shape user experience throughout the life of the therapy. Through careful consideration of patient needs, patient engagement can be targeted, increasing the likelihood of compliance.

It is contended that explicit consideration of engagement and compliance leads to the design of better medical devices, that are ultimately more efficacious as they are more likely to be used as prescribed. From a commercial perspective, the explicit consideration of compliance and patient engagement also provides device manufacturers with a compelling point of differentiation from competitor products.

