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*Patient  
Compliance and  
the Need for  
Technologies*

by Faiz Kermani



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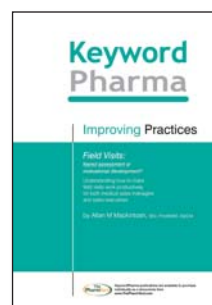
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# Patient Compliance and the Need for Technologies

Faiz Kermani

## Executive summary

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Patient compliance is a widely used but often ill-defined term. It is also a significant challenge for the global healthcare market and all of its major stakeholders, with serious economic and societal implications. In the USA alone it is estimated that patient non-compliance costs the economy around US\$100 billion annually, including US\$8 billion in lost pharmacy revenues. Beyond this, patient non-compliance is proving to be a persistent thorn in the side of a growing global focus on improving health outcomes.

The ramifications for the pharmaceutical industry are huge. Many companies are seeking to develop alternative dosing and formulation strategies to tackle the problem. Studies have shown that once-daily and twice-daily treatments are most commonly associated with good compliance, while injectable medicines are considered the most respected among many patients.

But pharma companies appear very slow to adopt and embrace new interactive technologies to tackle compliance, despite growing evidence that they can help improve performance. Standard communications technologies such as email and SMS (Short Message Service) can now be deployed to deliver timely reminders to patients in routine care settings to take their medicines. But industry uptake is sluggish, perhaps because the escalating costs of traditional drug development are such that the sector appears cautious to invest further in another aspect of the R&D process, uncertain of the value it may provide.

Greater work, therefore, needs to be done to highlight the true value of new technologies in compliance programmes within pharma. But before that battle can be won, a thorough understanding of patient non-compliance and the factors that are central to it is essential. This Expert Review, *Patient Compliance and the Need for Technologies*, explains the background to patient compliance issues and sets the scene for an exploration of how technology can be harnessed to improve this significant but widely under-acknowledged challenge.

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## Introduction

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Tremendous advances have been achieved through the development of modern medicines, but their effective use is key to how successful they will be as therapies for patients. Therefore, healthcare improvements depend to a large degree on the willingness or ability of patients to take their medicines as instructed. These factors are often referred to broadly as 'patient compliance', with 'non-compliance' indicating the failure of patients to take medicines in their prescribed manner.

The issue of non-compliance is not a new one and has been investigated for many decades worldwide. However, since non-compliance reduces the quality of healthcare and can lead to dangerous consequences for patients, there is currently a renewed emphasis on the problem. In fact, patient non-compliance is taken so seriously in the USA that the *New York Times* has dubbed it the nation's "other drug problem". The economic consequences of non-compliance are profound. For governments and healthcare providers, non-compliance is a waste of valuable healthcare resources that exacerbates the heavy economic impact of major diseases. There are also significant financial implications for the pharmaceutical industry when patients do not adhere to their prescriptions, as recommended by their doctor, mainly due to lost revenue opportunities.

Growing efforts have been made by all parties in the healthcare sector to find optimal therapeutic approaches for patients. A range of technologies and product strategies have been developed to address the problems concerning patient compliance, but these can only succeed if other approaches are also included, such as involving patients as partners in decisions about their medicines. Equally important is a thorough understanding of patients themselves and their attitudes to the medicines they take. Social, economic and cultural issues all play a part in determining patient compliance. Furthermore, such factors can vary widely amongst populations across the world and so care must be taken in making assumptions on how a particular medicine will be accepted in different countries.

**Faiz Kermani**  
May 2007

### About the author

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Dr Faiz Kermani has 15 years' experience in both academia and the pharmaceutical industry. He has worked in pharmaceutical R&D, pricing and reimbursement, marketing and medical education. Dr Kermani holds a PhD in Immunopharmacology from St. Thomas' Hospital, London, and a First Class Honours degree in Pharmacology with Toxicology from King's College, London. He has written extensively on international healthcare issues, and is on the editorial board of a number of publications, including *Contract Services Europe* (Advanstar Communications, UK), *Contract Pharma* (Rodman Publishing, USA) and *Medical Science Liaison (MSL) Quarterly* (MSL Institute LLC, USA). In March 2006, he was a delegate on the UK Government's Trade and Investment Biotech Scoping Mission to China and contributed to the subsequent report. Dr Kermani is co-editor of the multi-author book *Patient Compliance: Sweetening the Pill* (Gower Publishing, 2006), much of which forms the baseline for this expert review.

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