

Changing diabetes®

Inpatient diabetes? There's an app for that...

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Multidisciplinary diabetes specialist teams are already aware that there is much we need to do to improve the standards of care for inpatients with diabetes. Thankfully, the profile of inpatient diabetes has been raised in recent years due to the annual National Diabetes Inpatient Audit, as well as through conferences and the development of national diabetes guidelines, including those developed by the Joint British Societies of Diabetes (2013a, 2013b). These developments have been stimulating attempts to improve hospital-based care for all people with diabetes.

Education for non-specialist staff

One fundamental issue that needs to be addressed is that the vast majority of people in hospital with diabetes in the UK are being cared for by non-specialist staff. It is essential that these healthcare professionals are appropriately skilled to manage this group of people and they are equipped to cope with people with diabetes who have specific care needs.

Gaps in the knowledge of ward staff inevitably results in lower standards of care with increased clinical risk, which has been demonstrated at the authors' trust – and at many others – on countless occasions. All ward staff are busy and resources are stretched, which makes it difficult for inpatient diabetes teams to deliver regular trust-wide face-to-face teaching and training that can be delivered to all non-specialists.

Online information

One approach to spreading information about diabetes has been distributing huge bundles of handouts, but this does not seem to produce lasting benefits. The obvious solution would be access to online information, but this can be difficult on wards as there are limited numbers of computers in clinical areas. This makes it difficult for healthcare staff to access concise information about diabetes care swiftly in acute situations.

With the explosion of smartphone applications in

recent years and following the international success of the University Hospital Southampton NHS Foundation Trust's own antibiotic guidance app (MicroGuide), we uncovered a gap in the market for apps that support inpatient diabetes care. Hence, DiAppBetes was born.

Development of the app

The first step in the development of this app was to conduct a survey of local medical and nursing staff. This survey asked for personal reflections on the direct clinical experience working with people with diabetes. This survey revealed the key areas of diabetes care that clinical staff found challenging or that had been associated with errors in care. These included distinguishing insulins, adjusting insulin doses and managing hypoglycaemia. This formed

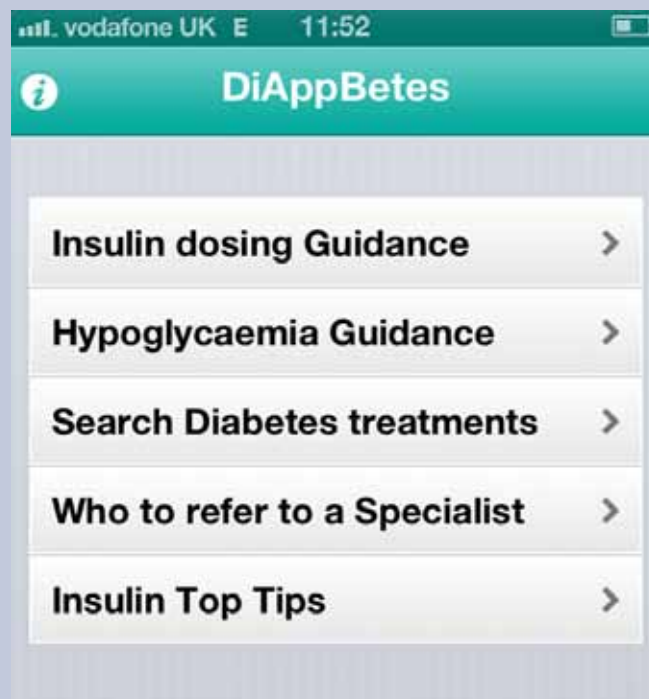


Figure 1. The advice provided in DiAppBetes is deliberately concise so key information can be accessed easily and promptly

the basis of the development of a diabetes app for healthcare professionals.

DiAppBetes

DiAppBetes was launched in February, 2012. The app acts as a decision support tool and is deliberately concise so key information can be accessed easily and promptly by

smartphone or tablet (see *Figure 1*).

Advice is provided on how to prescribe insulin, with a touchscreen tool to dose-adjust insulin safely. The app also provides guidance on how to manage hypoglycaemia, depending on the severity of the hypoglycaemic episode and the condition of the individual, for example, if they are conscious or unconscious. A summary of all insulins and non-insulin-based treatments is also provided in order to promote safer prescribing (see *Figure 2*). Finally, the app also includes a helpful “traffic light system” checklist to use when deciding which people should be referred to a specialist.

National guidance is used where relevant and the app was endorsed by both NHS Diabetes (now part of NHS Improving Quality) and ThinkGlucose (developed by the NHS Institute for Innovation and Improvement).



Figure 2. A summary of all treatments is provided in order to promote safe prescribing.

Assessing the impact of the DiAppBetes

One of the key challenges is demonstrating the success of the app in addressing aspects of inpatient diabetes care, such as safer insulin prescribing or effectively managing hypoglycaemia. At present, the app can only be assessed on direct feedback to the creators or from comments left by people who have downloaded the app from Apple or Android app sites.

Perhaps through encouraging inpatient diabetes teams to use the app nationally, recommending it to their own staff and collating surveys on outcomes based on its perceived value, we can then begin to build a picture of the app's impact on the quality of diabetes care. ■

Joint British Societies of Diabetes (2013a) *The management of diabetic ketoacidosis (DKA) in adults*. JBDS, Norfolk. Available at: <http://bit.ly/1hdKw3c> (accessed 16.12.13)
 Joint British Societies of Diabetes (2013b) *Hospital management of hypoglycaemia in adults with diabetes*. JBDS, Norfolk. Available at: <http://bit.ly/1hdKw3c> (accessed 16.12.13)

DiAppBetes is free to download for Apple and Android enabled devices.



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Changing diabetes® is Novo Nordisk's global campaign to improve prevention, detection and care, and to put diabetes on the public and political agendas. The company's global advocacy to raise awareness of and spur action on diabetes supports the implementation of the UN Resolution on diabetes, adopted in December 2006, in recognition of diabetes as a major global health challenge and in respect of the human right to proper care. As part of this campaign, *Journal of Diabetes Nursing* now features articles under the banner of Changing diabetes® – welcoming submissions from you, our readers, outlining any UK-based initiative, research project, local idea, or personal opinion that relates to improving diabetes care in the UK. If you have any queries, or would like to submit your work for this feature, please email jdn@sbcommunicationsgroup.com or call 020 7627 1510.

