

PRESS RELEASE

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MONSTER MANOR APP SET TO BE A GAME CHANGER IN THE MANAGEMENT OF DIABETES FOR THE SMARTER iGENERATION

Smartphone App for children with Type 1 diabetes rewards users for managing their diabetes

[Oxford, UK – October 16, 2013] A new healthcare App – Monster Manor – aimed at helping children with Type 1 diabetes better manage their condition is now available in the UK. Ayogo Health, working with Diabetes UK and Sanofi Diabetes, developed Monster Manor to encourage children to test and record their blood glucose levels on a more regular basis. With only 15% of young children managing to achieve their blood glucose targets¹ this App could make a big difference to the way they manage their diabetes.

Children between the ages six and 13 with Type 1 diabetes are expected to take on increasing responsibility for testing and logging their own blood glucose. By incorporating a casual-play collecting game, Monster Manor provides a fun and rewarding experience for those children who struggle with this growing responsibility. The overall benefit will come from the fun element that is hoped will encourage children to test more regularly. Testing and logging blood glucose within the game's built-in tracker generates positive feedback to keep children engaged in this crucial aspect of their self-care with the aim of generating better outcomes. Research shows that just one extra test a day in teenagers leads to a 0.4% reduction in blood glucose concentration or HbA1c, which could be very significant². High levels of glucose present in the blood over a sustained period of time damages blood vessels. This can lead to increased chances of developing diabetes-related complications, such as kidney failure, nerve damage, damage to the retina (the seeing part) of the eye and cardiovascular diseases³.

Michael Fergusson, CEO at Ayogo Health comments, "As game designers, watching children play Monster Manor has been very satisfying, as the kids tell us that it's fun and they want to keep playing. But for us, fun is only a means to an end; the goal ultimately is to improve health outcomes for the children we work for. We couldn't be more delighted that Oxford AHSN will be formally evaluating Monster Manor to measure the difference it makes in the lives of children who are struggling with the



challenge of managing diabetes. We are very thankful for the support from Sanofi and Diabetes UK in making this pilot project a reality.”

Figures show that 94.2% of infants, children and young people with diabetes are not recorded as receiving all the care processes recommended by the National Institute of Health and Care Excellence, suggesting that there is more work to be done to drive improvements¹. Simon O’Neill, Director of Health Intelligence and Professional Liaison at Diabetes UK, said: “Parents tell us that their children often find regular blood glucose monitoring very hard to accept and it can often become a source of tension in families. By turning the testing into a game we hope it will encourage young children with diabetes to manage their condition more effectively and help them succeed in achieving tighter blood glucose control in their early years. In turn this would help them reduce the risk of developing the serious complications associated with diabetes in later life.”

The new App also kick-starts a new Diabetes Clinical Network in Oxford that will allow it to be evaluated in a comprehensive manner. The Diabetes Clinical Network will be part of the Oxford Academic Health Science Network that aims to put innovation at the heart of the NHS through an approach that unites the regional scientific and academic communities and industry.

Dr Katharine Owen, Oxford Academic Health Science Network Diabetes Network Clinical Lead and Honorary Consultant at the Oxford Centre for Diabetes, Endocrinology and Metabolism, said: “Technology is part of everyday life, so using it to help with balancing blood sugars and have fun at the same time is a brilliant idea! We are excited to be evaluating this project and hope our new diabetes network will come up with more bright ideas like this one that will make a big difference to patients of all ages.”

Dr Paul Durrands, Chief Operating Officer of the Oxford Academic Health Science Network, said: “The diabetes network is off to a great start and is the first of eight clinical networks we are funding. This initiative is a great example of how NHS clinicians and leading researchers can work with industry to improve patients’ health and well being.”

Sanofi Diabetes has worked with Ayogo and Diabetes UK to bring Monster Manor to the diabetes youth market with the ambition of making a real difference to the lives of the children and parents who will benefit from it. The role of gamification in the management of chronic conditions is yet to be tested and the Monster Manor concept could be a new approach that soon catches on. Andrew

Hockey, Medical Director Sanofi Diabetes said, “For children with Type 1 diabetes who are resistant to testing this new App could help manage their condition with the promotion of better behaviours to supplement and support their daily regimen. We see this new App as a solution that promotes better outcomes.”

Monster Manor is a free game for iPod®, iPhone®, iPad® and Android that helps families of children with Type 1 diabetes stay on top of their blood glucose monitoring. It aims to engage children in their health management and improve adherence to treatment while having fun. It is now available to download from the Apple App Store or Google play.

NOTES TO EDITORS

Case studies are available upon request.

About diabetes

Diabetes is a common life-long health condition where the amount of glucose in the blood is too high because the body cannot use it properly. This is because the pancreas does not produce any insulin, or not enough, to help glucose enter the body’s cells – or the insulin that is produced does not work properly (known as insulin resistance)⁴.

High levels of glucose present in the blood over a sustained period of time damages blood vessels. This can lead to increased chances of developing diabetes-related complications, such as kidney failure, nerve damage, damage to the retina (the seeing part) of the eye and cardiovascular diseases³.

The following blood glucose levels are recommended by NICE and the International Diabetes Federation and are target ranges for people without diabetes^{5,6,7}:

Target levels by Type	Before meals (pre-prandial)	2 hours after meal (post-prandial / post-meal)
Non-diabetic	4.0 to 5.9 mmol/L	Under 7.8 mmol/L
Type 2 diabetes	4 to 7 mmol/L	Under 8.5 mmol/L
Type 1 diabetes	4 to 7 mmol/L	Under 9 mmol/L
Children w/ Type 1 diabetes	4 to 8 mmol/L	Under 10 mmol/L



Symptoms occur because some or all of the glucose stays in the blood and isn't used as fuel for energy. The main symptoms of undiagnosed diabetes can include passing urine more often than usual (especially at night), increased thirst, extreme tiredness and blurred vision.³

Type 1 diabetes, which accounts for between 10 and 15 percent of all people with diabetes, occurs when no insulin is produced at all because the insulin-producing cells in the pancreas have been destroyed by the bodies' own immune system. Nobody knows for sure why this occurs but it is not linked to lifestyle factors like being overweight.^{8,9}

Type 2 diabetes accounts for between 85 and 90 per cent of all people with diabetes and occurs when the pancreas either does not produce enough insulin, or the insulin it produces does not work as well as it should (insulin resistance). Some of the risk factors associated with Type 2 diabetes are not controllable, e.g. genetic factors, while others, such as being overweight, can be controlled.^{9,10}

There is currently no cure for either Type 1 or Type 2 diabetes. For Type 1 diabetes, treatment means multiple daily insulin injections or infusions to replace the body's natural insulin, finger prick blood testing, eating healthily and taking regular exercise. For Type 2 diabetes this is likely to involve lifestyle changes, such as diet, weight loss and exercise, which will have enormous health benefits and allow a person to continue their normal day-to-day life. They may also be required to take diabetes medication or insulin, or a combination of the two.¹¹

About Ayogo

Ayogo Health is the global leader in applying the behavioural psychology of games and social networks to patient self-care. Ayogo created Monster Manor to help families who struggle with the challenge of managing Type 1 (also known as juvenile) diabetes. Children between ages six and 13 with Type 1 diabetes are expected to take on increasing responsibility for testing and logging their own blood glucose. By incorporating a casual-play collecting game, Monster Manor provides a fun and rewarding experience for those children who struggle with this growing responsibility. Testing and logging blood glucose within the game's built-in tracker generates positive feedback to keep children engaged in this crucial aspect of their self-care.



About Diabetes UK

Diabetes UK is the leading UK charity that cares for, connects with and campaigns on behalf of all people affected by and at risk of diabetes. For more information on all aspects of diabetes and access to Diabetes UK activities and services, visit www.diabetes.org.uk

For more information on reporting on diabetes, download Diabetes UK's journalists' guide:

www.diabetes.org.uk/journalists-guide

About the Oxford Academic Health Science Network (OAHSN)

The Oxford Academic Health Science Network brings together the strength of the NHS, excellent and world leading clinical research from nine regional universities and local and international business to make best use of the wealth of skills, experience and knowledge that exists in Berkshire, Oxfordshire, Buckinghamshire, Milton Keynes and Bedfordshire. The mission of the OAHSN is to improve the health of the population and increase wealth generation for the region.

www.oxfordahsn.org

About Sanofi Diabetes

Sanofi Diabetes strives to help people manage the complex challenge of diabetes by delivering innovative, integrated and personalised solutions. Driven by valuable insights that come from listening to and engaging with people living with diabetes, the Company is forming partnerships to offer diagnostics, therapies, services and devices, including innovative blood glucose monitoring systems. Sanofi markets both injectable and oral medications for people with Type 1 or Type 2 diabetes.

About Sanofi

Sanofi, an integrated global healthcare leader, discovers, develops and distributes therapeutic solutions focused on patients' needs. Sanofi has core strengths in the field of healthcare with seven growth platforms: diabetes solutions, human vaccines, innovative drugs, consumer healthcare, emerging markets, animal health and the new Genzyme. Sanofi is listed in Paris (EURONEXT: SAN) and in New York (NYSE: SNY).

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