Working in Partnership to Commercialise Digital Health Innovations

Designed by clinicians, focused on patients, powered by AI.

The King’s Fund: Partnership Models in the NHS - 6th February 2018

Lord Drayson PhD FREng
Chairman & CEO, Drayson Technologies Group
Strategic Research Collaboration with Oxford

Strategic research agreement with the University of Oxford and Oxford University Hospitals NHS Foundation Trust

Commercialise 3 digital health products that have undergone clinical testing and validation

Data Sharing Agreement to enable analysis of anonymised patient health data under strict controls and in accordance with Caldicott Principles

Equity and royalty return to the NHS Trust and the University

“NHS First” strategy followed by international roll-out
Our Approach

Partnership
Working in partnership and sharing the wealth created with our partners in the public sector.

Patient Care
Putting patient care first; enabling excellent clinicians equipped with excellent tools to deliver excellent care.

Clinician-led design
Clinician-led product design, that patients and clinicians love to use.

Regulatory
Built to an architecture and regulatory standard that enables world-wide deployment - but invented, deployed and validated in the NHS first.
Product Commercialisation

SEND™
Hospital System for vital-sign observations

EDGE™
Prescribed Digital Therapeutic for the management of COPD

GDM-Health™
Prescribed Digital Therapeutic for the management of gestational diabetes

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## Product Development Pipeline

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<tr>
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<th>Research</th>
<th>Clinical Evaluation</th>
<th>EU CE Marketing Approval</th>
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<th>IG Certificate Toolkit</th>
<th>510K Application</th>
<th>FDA Approval</th>
<th>FDA Clearance For Sale</th>
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<tbody>
<tr>
<td><strong>SEND</strong></td>
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<td><strong>GDm-Health</strong></td>
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Products enter Drayson Health Quality Management System for:

- Technical Development
- Deployment
- Support

Product lifecycle & Version Control

Products branded and packaged for market readiness and promotion
Progress in our First Year

Following our move into the Big Data Institute next to IBME, we have built a fully integrated medical software development and commercialisation team including regulatory, software development, testing, customer support, sales, marketing, product and clinical.

We built, received regulatory approval and installed SEND in the South Warwickshire NHS Trust and we took over operational responsibility for SEND in the Oxford University NHS Trust on schedule.

We have built a Quality Management System dual aligned with EU, US and MDSAP (Japan, Brazil, Canada & Australia), achieved our regulatory milestones, on track for first FDA 510k submission.

- Notified Body recommendation for certification against ISO9001, ISO13485, ISO27001, ISO20000
- NHS Information Tool Kit accreditation
- CE mark and pre-market clearance for SEND v18.1 deployed to SWFT
- NICE recommendation for GDM-health
- MHRA registration for SEND v18.1

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## Adoption and Satisfaction

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<th>SEND</th>
<th>GDm</th>
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<td><strong>Active patients each month</strong></td>
<td>Approximately 10,000 patient encounters each month in Oxford University Hospitals</td>
<td>Approximately 250 active users each month across pilot sites</td>
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<td><strong>Readings</strong></td>
<td>Approximately 18,000 observation sets each month (each with 8 data points)</td>
<td>Average of 30 blood glucose readings per patient per week. 85% compliance with minimum number of readings</td>
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<td><strong>Satisfaction</strong></td>
<td>Initial System Usability Score was 77.8 out of 100°. 4.3/5 scored for agreement with &quot;I think I would like to use SEND frequently&quot;</td>
<td>Patients reported that the system is convenient (48 out of 49) and fitted with their lifestyle (47 out of 49)</td>
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1 Average usage between October 2016 and December 2017  
2 Wong et al. BMC Medical Informatics and Decision Making (2015)  
3 Average usage at John Radcliffe, Royal Berkshire & Frimley Park hospitals between July 2017 and December 2017  
What Clinicians Say

“love SEND”
(ICU Registrar)

“excellent innovation software, more please! Can you please change your careers and redesign NHS software for the good of humanity?”
(Ward Nurse)

“I remain SEND’s greatest fan”
(Ward Matron)
“The GDm-Health™ system has helped to transform the way we deliver care for women with diabetes in pregnancy. It is user-friendly, providing real-time patient data and an additional channel for communicating with them, reducing the time needed to analyse patient data, and generating a secure medical record without having to bring the patient to hospital.”

Rachel Crowley, Diabetes Specialist Midwife
Royal Berkshire NHS Foundation Trust
Partnership Lessons – the essential ingredients for success

Clinician led design, focused on improving care

World class engineering and medical science

Peer reviewed evidence of clinical effectiveness and health economics

Professionally written code built under a dual aligned Quality Management System

A “double-bottom line” approach to business, creating and sharing wealth

Regular project management meetings and timely communication to build trust and confidence
Designed by clinicians, focused on patients, powered by AI.