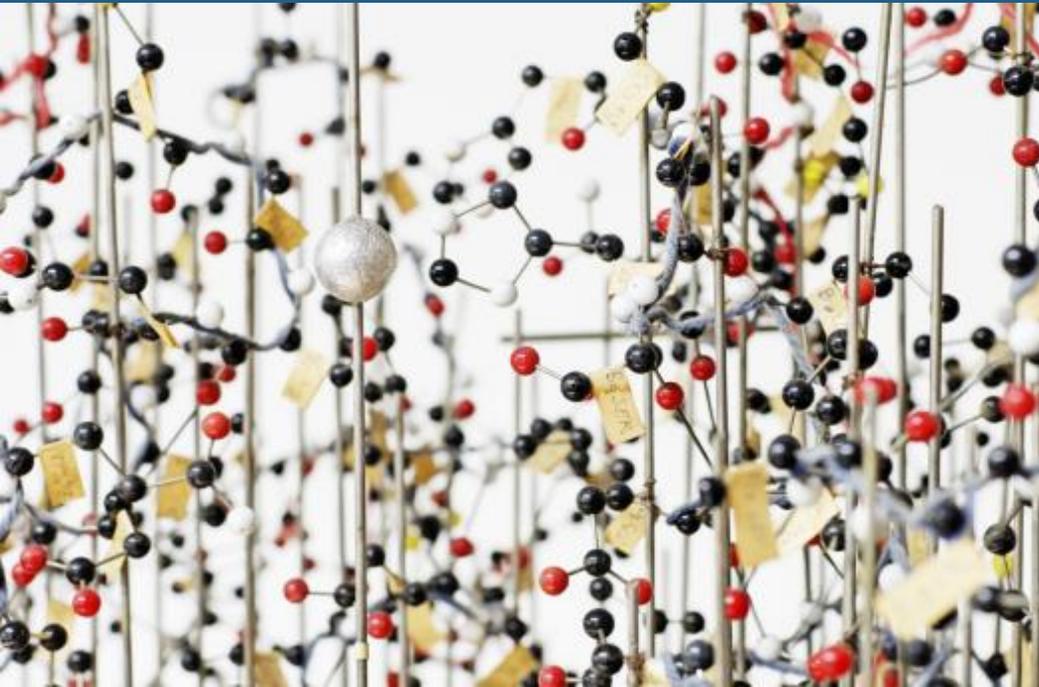


The REACTION Project

Improving the management of diabetes with the aid of ICT



A Professional Service Platform for
Remote Accessibility to Diabetes
Management and Therapy in
Operational Healthcare Networks



An intelligent health service platform

Remote monitoring and therapy management of patients with diabetes

The general idea is to facilitate **control of the blood-glucose** level and other vital signs, which are crucial for good **diabetes management** and **insulin therapy**.

In REACTION, we have developed methods and tools to **support patients and healthcare professionals** in the day-by-day management of diabetes, in **hospital and primary care** contexts.





In hospital





General Practice

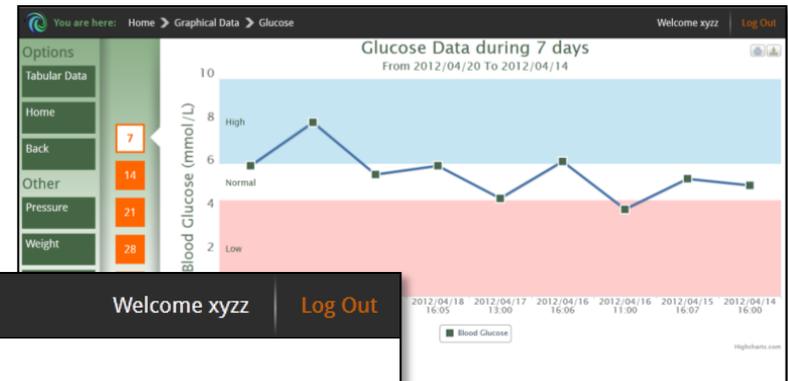
- Managing and treating patients with diabetes in Primary Care must take into account other chronic and diabetes-related illnesses that the patients often have.



The objective is to enable patients to be more proactive with the self-management of their behaviour and activities.



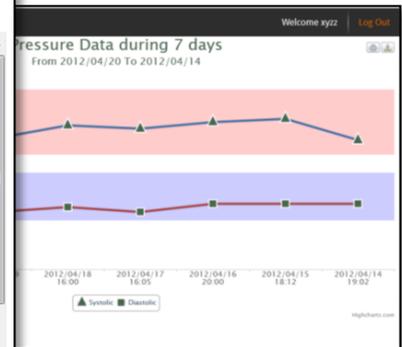
Sharing Information - Patient Portal



Date	Time	Blood Glucose (mmol/L)	Intake Status
2012-04-20	14:38	6	casual
2012-04-20	13:32	8	casual
2012-04-19	20:43	5.6	postprandial
2012-04-18	16:05	6	postprandial
2012-04-17	13:00	4.5	preprandial
2012-04-16	16:06	6.2	postprandial
2012-04-16	11:00	4	casual
2012-04-15	16:07	5.4	postprandial
2012-04-14	16:00	5.1	postprandial

Blood Glucose Level

To provide enough fuel (energy) for every cell in the body to work properly, a constant supply of glucose keeps circulating round in the blood. The level of glucose needs to be controlled carefully. Too little glucose can make you feel very unwell (hypoglycaemia). Too much glucose can eventually cause health problems (for





Managing Patient Information - Clinician Portal

Project Reaction- Clinician x REACTION Patient Portal: x

https://reaction.chorleywood.org/ReactionDemo/Equipments.aspx

Entertainment Work Utilities Interesting Jo www.ircst.health.n... How can you fix the ... Other bookmarks

REACTION
Remote Accessibility to Diabetes Management and Therapy in Operational healthcare Networks

Home

Add New Device:

Device ID:

Device manufacturer:

Home

Add New Patient

All Patients

Rules

Notifications

Equipment

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Project Homepage

Device Management:

Search by:: Hash code or Device ID:

Dev ID or Hash code	Device Type	D
0000073901141100	Glucose Monitor	
0000073902440629	Glucose Monitor	
0000073902764671	Glucose Monitor	
0000073902764682	Glucose Monitor	
0000073902764701	Glucose Monitor	
0000073902764708	Glucose Monitor	
00091FFFFE80018F	BP Monitor	Not Allocated
00091FFFFE800628	BP Monitor	Not Allocated
00091FFFFE800AC4	Weighing Scale	Not Allocated

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Name	Date	Blood Sugar	Systolic	Diastolic	Weight (Kgs)	SPO2(%)	Diet	Activity	Med	Habits	Reviewed
Mrs Barbara Greenwood	12/03/2013	13.3	99	47		61					
Mr John Peppiatt	12/03/2013		109	62							
Mrs Valene Frost	12/03/2013										
Mr James Nye	12/03/2013	8.6									
Ms Jo Furse	07/03/2013	4.5									
Ms Jo Furse	05/03/2013	6.9									
Ms Jo Furse	04/03/2013	6.7									
Mrs Barbara Greenwood	12/03/2013										
Mrs Barbara Greenwood	10/03/2013										
Mrs Barbara Greenwood	10/03/2013										
Ms Jo Furse	12/03/2013	4.5									
Mr James Nye	12/03/2013	8.6									
Mrs Penny Lawrence	09/03/2013	6.6									
Mrs Penny Lawrence	11/03/2013	5.3									

Diet Questionnaire:

Ms Jo Furse Completed this questionnaire on: 12/03/2013 20:49:05

You are running late in the morning and haven't eaten breakfast yet. What do you do?	You regularly skip breakfast
It's time for your morning break. What do you opt for?	A cup of coffee and a chocolate bar
How many portions of fruit and vegetables do you eat on a typical day?	0 piece of fruit
When you grab a drink on the go, what is it most likely to be?	A fizzy soft drink
You're heading for lunch with friends. What would you be most likely to choose?	Fried egg and bacon sandwich with something sweet like a doughnut or chocolate
How many glasses of water do you drink per day?	None
Tonight, you're ordering a takeaway with friends. What would you be most likely to choose?	Chicken or vegetable korma with pilau rice
What are you most likely to choose when picking a dessert?	Cream doughnut

Carbs diary

Date	Time	Carbs	Meal Type
04/07/2012	09:40	5	Lunch
03/07/2012	07:55	6	Lunch
02/07/2012	08:45	5	Breakfast
01/07/2012	13:59	5	Lunch
29/06/2012	07:00	6	Lunch
29/06/2012	06:59	9	Breakfast
28/06/2012	09:47	6	Dinner



Devices and Gateways for Primary Care



Internet – wired / wireless

Display



PC



Tablet



G.P.R.S

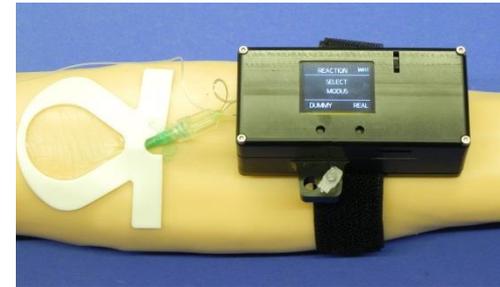


Other areas of research

- Sensors
 - ePatch
 - Security environment
 - Closed-loop Algorithms
 - Automatic Glucose Control
 - Glucose-insulin-glucagon Model
-
- Other results
 - Socio economic studies
 - Legal issues
 - Business models and exploitation plans



iCath sensor



IR sensor



ePatch



REACTION Consortium

Atos

CNet
SVENSKA AB



iMM Institut für
Mikrotechnik
Mainz GmbH



IN-JET^{APS}



Bayer Technology Services



Chorleywood
Health Centre

Brunel
UNIVERSITY
WEST LONDON



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RESEARCH

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