



Adopter

MyDiabetesMyWay / NHS Scotland

Type of organisation

National Health Service for Scotland

Country

United Kingdom

Technological supplier

MyWay Digital Health

Name of the Solution

MyDiabetesMyWay

Website: <http://www.mydiabetesmyway.scot.nhs.uk>

Video presentation: <https://vimeo.com/206994170/45130575fd>

My Diabetes My Way (MDMW) is an online portal empowering and supporting people with diabetes in self-management. MDMW has been running since 2008, was developed by University Of Dundee and funded by the Scottish Government.

MDMWs include a complete multifunctional tool with communication, reporting toolset and an extensive evaluation with improvement in clinical parameters/ patient reported outcomes. "The knowledge provided helps me understand the normal parameters and where I stand/can improve", said a patient.

THE PROBLEM THIS SOLUTION TRIES TO SOLVE

Diabetes is a major global health challenge, currently affecting 8-9% of the world population with high associated treatment costs e.g. 15% of the entire UK health budget. 1 in 5 people have diabetes in the Middle East (linked to over 50% of all deaths). Per-person average treatment costs range from \$2,550 in Arab Emirates to \$10,000 per annum in the US, (2-3 times higher than individuals without diabetes). Cost saving population-based solutions are desperately needed.

People with diabetes spend many hours self-managing their condition e.g. blood glucose (sugar) monitoring, medication adjustment, foot care, weight, dietary and activity management. Good self-management reduces costly long-term complications (e.g. ulcers, amputations, blindness, kidney disease, heart disease, stroke/vascular disease, mental health, sexual and neurological disorders). Regular knowledge updates, feedback on results, motivational support and flexible access to health care staff is crucial, reducing clinic visits, hospitalisations and death, leading to longer and healthier lives with significantly reduced health care costs.

My Diabetes My Way (MDMW) is an online portal empowering and supporting people with diabetes in self-management. MDMW has been running since 2008, was developed by University Of Dundee and funded by the Scottish Government. It is accessible to all 290,000 people with diabetes in NHS Scotland.

MDMW:

- Gives patients access to institutional (NHS) health records.
- Integrates with home-recorded data.
- Utilises data driven algorithms for highly tailored self-management advice and care planning reports.
- Enables goal setting.
- Enables secure communication with health care professionals/ peers.
- Provides access to 100's of high quality multi-media educational resources.
- Links to social media.

My Way Digital Health Ltd is a University of Dundee spin out company (incorporated Jan 2017) who are commercialising and customising MDMW for customers outwith Scotland aiming to build a high growth international business and improve diabetes care internationally.

INNOVATIVE IT SOLUTION THAT WAS IMPLEMENTED

MDMW is unique in delivering a comprehensive multi-tool population based low cost self-management line platform. MDMW is NOT another diabetes smartphone app! but a market leading institutional platform which integrates multiple data sources i.e. i) institutional data from secondary care, primary care, laboratories, national screening services, and in-patient sources, and ii) patient home recorded data (including blood glucose), driving tailored decision support/ educational advice and communication tools through embedded rules and algorithms.

MDMWs Unique Selling Points include:

- Developed specifically for/ by the diabetes community utilising a multidisciplinary team (clinicians, technicians and patients).
- The only nationally operating self management platform.
- A complete multifunctional tool with communication, reporting toolset (including institutional health data linkage/ access and data driven advice).
- Extensive evaluation with improvement in clinical parameters/ patient reported outcomes.
- Unique team skills in national implementation, information governance and data integration.
- Multi-award winning.

New Features in development include:

- Data integration with 3rd party apps, activity monitors and remote monitoring devices.
- Data driven tailored automated “push notification” decision support to mobile devices/ big data predictive analytics.

MyWay Digital Health are working with Pharmatics Ltd. aiming to incorporate machine learning/ artificial intelligence to retain market leadership. Work with Glasgow School of Art/ Digital Health Institute is enhancing platform design/assessing user needs for the commercial marketplace.

CURRENT IMPACT ON THE PATIENTS / END USERS

MDMW reports very positive patient reported outcomes/ improvements in key health markers (weight, HbA1C, BP, glucose ($p < 0.01$)) and has published in peer-reviewed journal publications.

Summary findings from >1,000 users felt MDMW helped them:

- Make better use of their consultation (89.6%)
- Manage their diabetes better (88.2%)
- Improved their diabetes knowledge (90.3%)
- Improved their motivation (89.3%)

Feedback:

“Thanks, newly diagnosed and find mdmw very handy as it is near impossible to get through to the doctors these days to get results. Who ever thought this up should get a medal”

“The knowledge provided helps me understand the normal parameters and where I stand/can improve...”

“It is great to be able to view all of my results so that I can be more in charge of my diabetes...”

National Awards include:

- DUK Self Management Award (2015),
- UK QiC Diabetes Award (2013),

- BMA commendation (2014),
- IOIC Best Stakeholder Site Award (2014)

MDMW is an international exemplar and features in NHS Scotlands e-health strategy.

CURRENT SUCCESS

MDMW currently has over 25,000 registrants across the whole of Scotland. It is a fully working and scaled platform (first launched in 2008) and is funded by the Scottish Government/ NHS e-health department. Observational studies have demonstrated improvements in key health parameters in users including long term blood glucose control, blood pressure, weight, and cholesterol ($p < 0.05$), all of which are risk factors for complications. Treatment of diabetes complications is extremely costly. We are currently working with statisticians and health economists to translate these improvements into health costs (work funded by Digital Health Institute). Considering the very low running costs for the platform (around 50p per diabetes patient per year in Scotland/ £1-2 per diabetes patient per year in the commercial product (based on the whole diabetes population), we expect this to demonstrate significant cost savings.

Ongoing awareness raising in Scotland will continue to grow the numbers (currently recruiting around 500 new registrants per month). The new communication tool features (secure messaging between health care professionals and patients), and integration of home uploaded blood glucose data (via a secondary product- Diasend) is changing practice with the potential to reduce the need for some face to face consultations and increase flexible remote care. This approach is being piloted in a multicentre communication platform study (ongoing) across Scotland.

HOW THE PROJECT CAN / WILL SCALE WITHIN OR OUTSIDE THE ADOPTER ORGANISATION

Based on the success in Scotland, an extensive keen customer base has spontaneously emerged, and the spin out company MyWay Digital Health has been set up to service this demand. We have sought partners for innovation grants (through established clinical and academic networks), and created opportunities for exposure at national/ international diabetes/ health care events. We are currently engaging with around 1/5 of all NHS Trusts/ AHSPNs/ CCGs in England, with £2.5million quotes issued in response to a £40million injection by NHS England for Diabetes Care. We have won an SBRI/ Innovate UK contract (phase 1 £100,000 with potential of <£1million in phase 2) for set-up and evaluation in Somerset. The NHS England Deputy Diabetes Director is highly supportive and has encouraged submission of a national digital funding bid for implementation across entire NHS England.

We also have interest in Europe (through previous academic collaborations), India (MRC grant outcome submitted) and Middle East: Kuwait (British Council Grant; outcome pending (£400,000)), and Abu Dhabi (Imperial College Diabetes Centre- visit Feb 2017).

MyDiabetesMyWay (MDMW) can potentially be adopted by any health care provider who is using electronic records to collect key diabetes data fields. In Scotland MDMW draws data from an integrated diabetes record (SCI-Diabetes), but in other locations, data integration will be with whatever IT systems and home recording devices are being used locally.