IMPROVING DIABETES CARE IN SCOTLAND 2018
UNDERSTANDING THE PRESENT AND SHAPING THE FUTURE
Type 1 Diabetes subgroup
Background and update

National diabetes meeting
Stirling 2018

Dr Fraser Gibb
Type 1 Subgroup SDG
Scottish T1 diabetes mortality

Significant loss of life years

Estimated Life Expectancy in a Scottish Cohort With Type 1 Diabetes, 2008-2010

DCCT and how we compare

Answer: not well

Cumulative mortality by treatment group

<table>
<thead>
<tr>
<th>No. at risk</th>
<th>Conventional</th>
<th>Intensive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>730</td>
<td>711</td>
</tr>
<tr>
<td>5</td>
<td>726</td>
<td>706</td>
</tr>
<tr>
<td>10</td>
<td>721</td>
<td>697</td>
</tr>
<tr>
<td>15</td>
<td>712</td>
<td>694</td>
</tr>
<tr>
<td>20</td>
<td>693</td>
<td>685</td>
</tr>
<tr>
<td>25</td>
<td>476</td>
<td>501</td>
</tr>
</tbody>
</table>

Age 50

Loss of life

TYPE 1 DIABETES

NO DIABETES
Age 60
Loss of life

TYPE 1 DIABETES

NO DIABETES
Age 70

Loss of life

TYPE 1 DIABETES

NO DIABETES
Effect of deprivation

SIMD quintiles in our T1 population (RIE)

![Bar chart showing the distribution of SIMD quintiles among a population.](chart.png)

Quintiles of SIMD 2012:
- Quintile 1: 20% Good, 43% Med, 37% Poor
- Quintile 2: 23% Good, 42% Med, 35% Poor
- Quintile 3: 28% Good, 46% Med, 27% Poor
- Quintile 4: 28% Good, 48% Med, 24% Poor
- Quintile 5: 16% Good, 47% Med, 37% Poor
- Unknown: 28% Good, 28% Med, 28% Poor
- Total: 29% Good, 45% Med, 27% Poor
Scottish outcomes
T1DM control across the world

![Graph showing HbA1c levels across different countries](image-url)
Mean HbA1c
By Health board and age in Scotland

<table>
<thead>
<tr>
<th>NHS Board</th>
<th>Type 1 diabetes: Age in years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shetland</td>
<td>0</td>
</tr>
<tr>
<td>Ayrshire and Arran</td>
<td>60</td>
</tr>
<tr>
<td>Borders</td>
<td>61</td>
</tr>
<tr>
<td>Dumfries and Galloway</td>
<td>67</td>
</tr>
<tr>
<td>Fife</td>
<td>63</td>
</tr>
<tr>
<td>Greater Glasgow and Clyde</td>
<td>56</td>
</tr>
<tr>
<td>Lothian</td>
<td>58</td>
</tr>
<tr>
<td>Grampian</td>
<td>56</td>
</tr>
<tr>
<td>Orkney</td>
<td>0</td>
</tr>
<tr>
<td>Tayside</td>
<td>60</td>
</tr>
<tr>
<td>Forth Valley</td>
<td>64</td>
</tr>
<tr>
<td>Highland</td>
<td>59</td>
</tr>
<tr>
<td>Lanarkshire</td>
<td>64</td>
</tr>
<tr>
<td>Western Isles</td>
<td>72</td>
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</tbody>
</table>
Diabetes improvement Plan

Priority areas

- **Prevention and Early Detection of Diabetes and its Complications**
  - To establish and implement approaches to support the prevention and early detection of type 2 diabetes, the rapid diagnosis of type 1 and the implementation of measures to promptly detect and prevent the complications of diabetes.

- **Type 1 Diabetes**
  - To improve the care and outcomes of all people living with type 1 diabetes.

- **Person-Centred Care**
  - To ensure people with diabetes are enabled and empowered to safely and effectively self-manage their condition by accessing consistent, high quality education and by creating mutually agreed individualised care plans.

- **Equality of Access**
  - To reduce the impact of deprivation, ethnicity and disadvantage on diabetes care and outcomes.
Diabetes improvement Plan

Priority areas

**Supporting & Developing Staff**
To ensure healthcare professionals caring for people living with diabetes have access to consistent, high quality diabetes education to equip them with the knowledge, skills and confidence to deliver safe and effective diabetes care.

**Inpatient Diabetes**
To improve the quality of care for people living with diabetes admitted to hospital by improving glucose management and reducing the risk of complications during admission.

**Improving Information**
To ensure appropriate and accurate information is available in a suitable format and effectively and reliably used by all those involved in diabetes care.

**Innovation**
To accelerate the development and diffusion of innovative solutions to improve treatment, care and quality of life of people living with diabetes.
# Diabetes improvement Plan

## Aims

<table>
<thead>
<tr>
<th>Triple Aim:</th>
<th>Quality of Care</th>
<th>Health of the Population</th>
<th>Value and Sustainability</th>
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</thead>
<tbody>
<tr>
<td><strong>REFRESHING THE DIABETES ACTION PLAN</strong></td>
<td>Person Centred Care</td>
<td>Safe Care</td>
<td>Primary Care</td>
</tr>
<tr>
<td><strong>Prevention and Early Detection of Diabetes and its Complications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance strategies to support people at risk of developing diabetes and early identification of those with diabetes</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earlier identification of the diagnosis of diabetes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Type 1 Diabetes</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Improve the care of children and young people</td>
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<td></td>
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<tr>
<td>Improve glycaemic control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Person-Centred Care</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timely and appropriate access to high quality patient education and self management support</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve care planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empower and engage people living with diabetes</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve the outcomes in pregnancy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equality of Access</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Minimise the impact of deprivation, ethnicity and geography</td>
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<td></td>
<td></td>
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<tr>
<td>Improve outcomes for individuals requiring additional support</td>
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<td></td>
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</table>
## Diabetes improvement Plan

### Aims

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<tbody>
<tr>
<td></td>
<td>Person Control</td>
<td>Care</td>
<td>Early Years</td>
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<td>Care</td>
<td>Whole Care</td>
<td>Inequalities</td>
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<tr>
<td></td>
<td>Safety</td>
<td>Care</td>
<td>Prevention</td>
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</table>

### Refreshing the Diabetes Action Plan

#### Supporting and Developing Staff

- Increase the level of consultation and patient engagement skills
- Increase the level of educator skills and confidence in delivering diabetes education
- Increase the level of psychological assessment skills

#### Inpatient Diabetes

- Improve glycaemic control of people admitted to hospital
- Improve foot care outcomes
- Improve the experience of people with diabetes admitted to hospital

#### Improving Information

- Improve access to appropriate and accurate information
- Better reporting and use of data at both national and local levels
- Improve patient access to their data to support self management

#### Innovation

- Promote networking and mechanisms to support innovation
- Increase pace of adoption of proven innovations
Quarterly reporting

T1DM

Quarterly Diabetes Reporting – Initial measures

1. % people with diabetes who receive all 9 key indicator measurements for diabetes

2. % persons with an HbA1c <58 mmol/mol at 1 year post diagnosis

3. % persons with an HbA1c <58 mmol/mol and >75 mmol/mol

4. % current smokers

5. % of people aged 50 to 80 with a total cholesterol <5mmol/l AND a systolic BP <140 mm Hg

6. % of new foot ulcers

7. % of people eligible for diabetic retinopathy screening actually screened within last 15 months

8. % of people with diabetes reaching end stage renal disease or requiring renal replacement therapy

9. % of people on CSII therapy

10. % of persons with a BMI \( \geq 30 \) who have lost \( \geq 5\% \) body weight in the last year

11. % persons who have attended structured education

12. % disengaged from diabetes care i.e. no HbA1c and retinal screening in the preceding 15 months

In most cases, measures will be reported for T1DM <18 yrs | T1DM >18 years | T2DM.
T1 Subgroup

Achievements and work in progress

• SCI Diabetes
  – Improving recording of key data (DKA / hypo)
  – Improving usability
  – Paediatric specific measures in SDS

• Survey of diabetes resources across Scotland

• Know the numbers

• Transition policy / Making connections

• DKA prevention
### T1 Subgroup

**CSII and CGM**

<table>
<thead>
<tr>
<th>Year</th>
<th>Aged under 18</th>
<th></th>
<th>Aged 18 or over</th>
<th></th>
<th>All ages</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Patients (n)</td>
<td>On Pump</td>
<td>%</td>
<td>Patients (n)</td>
<td>On Pump</td>
<td>%</td>
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<tr>
<td>2016</td>
<td>3013</td>
<td>1035</td>
<td>34.4</td>
<td>27859</td>
<td>2306</td>
<td>8.3</td>
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<tr>
<td>2015</td>
<td>2950</td>
<td>919</td>
<td>31.2</td>
<td>27379</td>
<td>1948</td>
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<tr>
<td>2014</td>
<td>2953</td>
<td>849</td>
<td>28.8</td>
<td>26748</td>
<td>1632</td>
<td>6.1</td>
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<td>2013</td>
<td>2917</td>
<td>659</td>
<td>22.6</td>
<td>26394</td>
<td>1188</td>
<td>4.5</td>
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</table>

- Big gains in CSII provision
- CGM (and SAP) is the next challenge
  - Training HCPs and patients
A week in the life of the average person with well-controlled diabetes
Freestyle Libre
Role of SDG
T1 Subgroup

Supporting innovation

• Big changes in our models of delivering care required

• Piloting the ‘Clyde Cloud’ model...
The game changers
How do we respond?
Glycaemic control is poor in Scotland

Life expectancy is lower in T1

Improving control saves lives

Pumps improve control (save lives)

Education improves control

CGM improves control