Local Intelligence Support (LIST)

Jackie Burman
Principal Information Development Manager

Information Services Division (ISD)

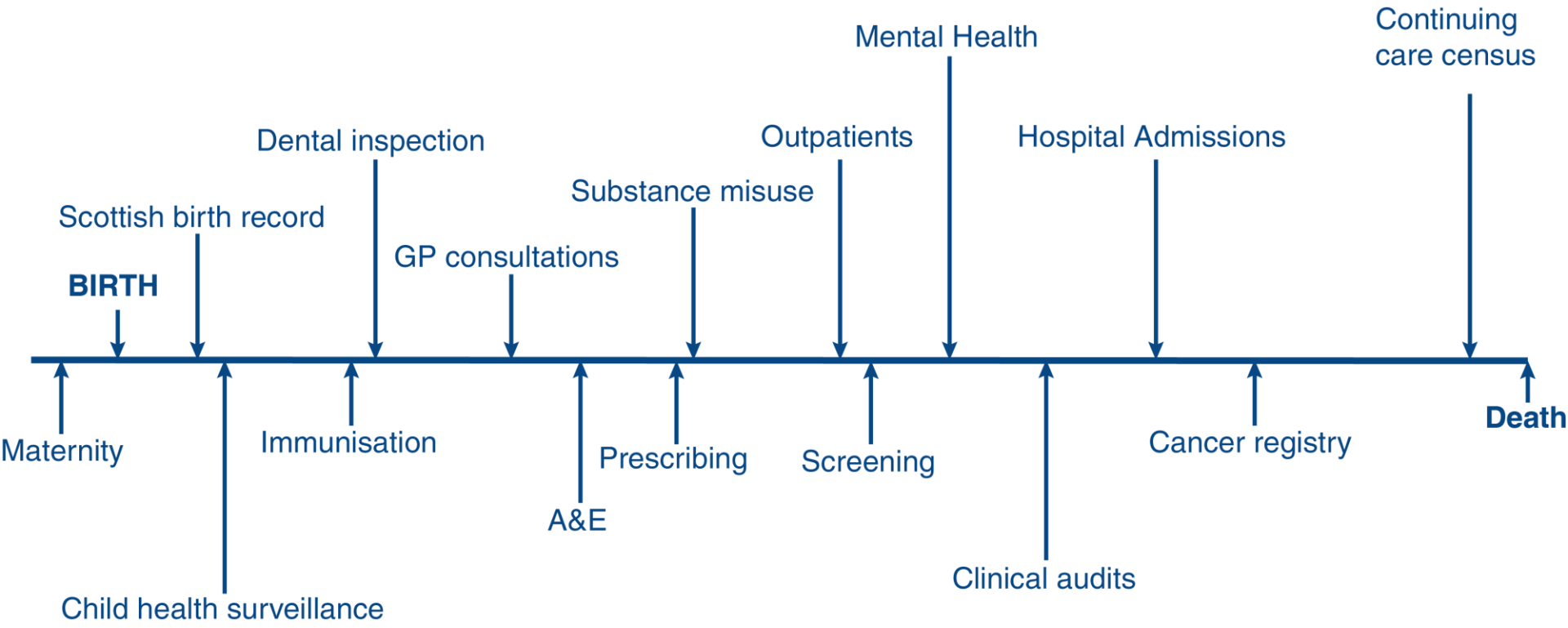
"To transform information into evidence for action to protect and improve health and well-being in Scotland."

The data landscape

Every week in Scotland data are collected on around:

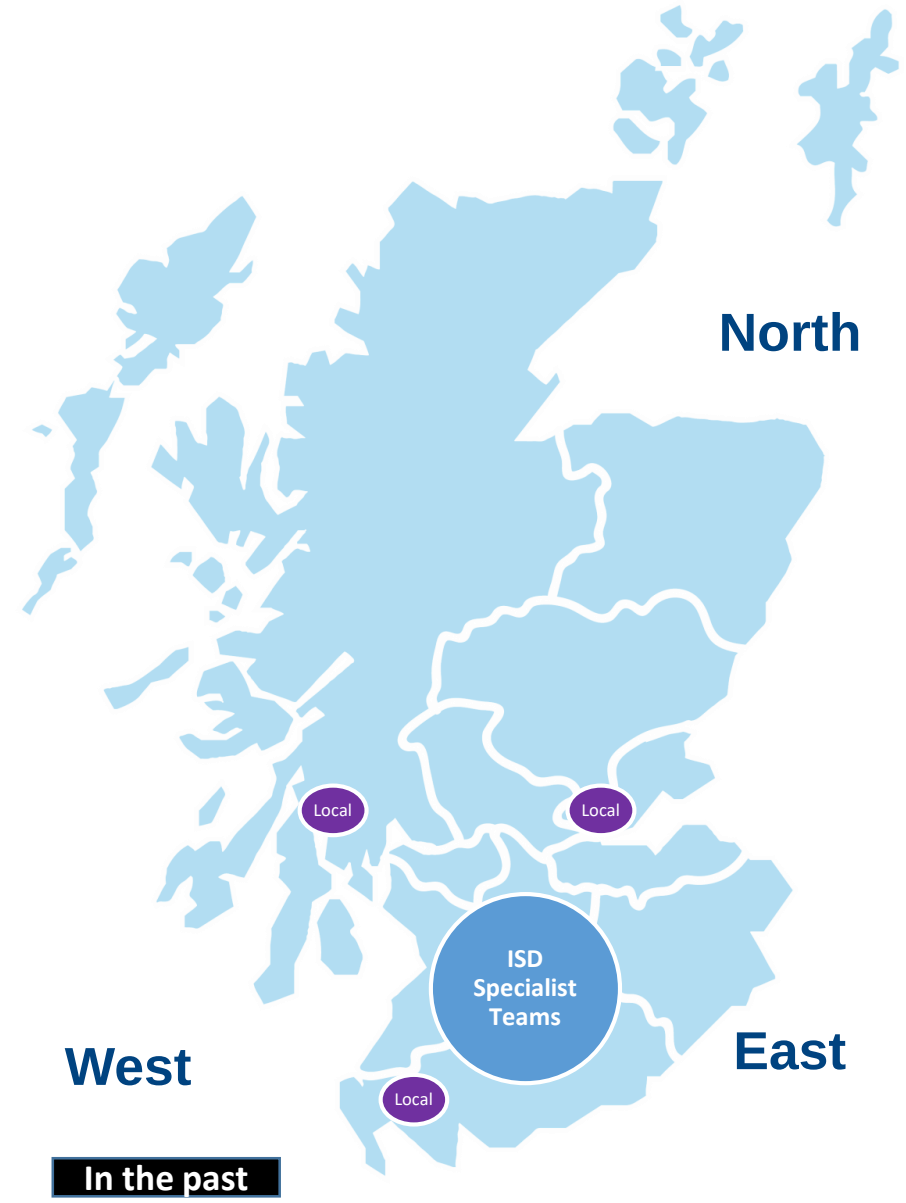
1,000 Births
15,000 Out of Hours attendances
20,000 Screened for cancer
30,000 Hospital admissions
30,000 A&E attendances
40,000 NHS eye exams & tests
90,000 NHS dental treatments
200,000 Outpatient clinic attendances
500,000 GP practice consultations
2,000,000 Drugs dispensed

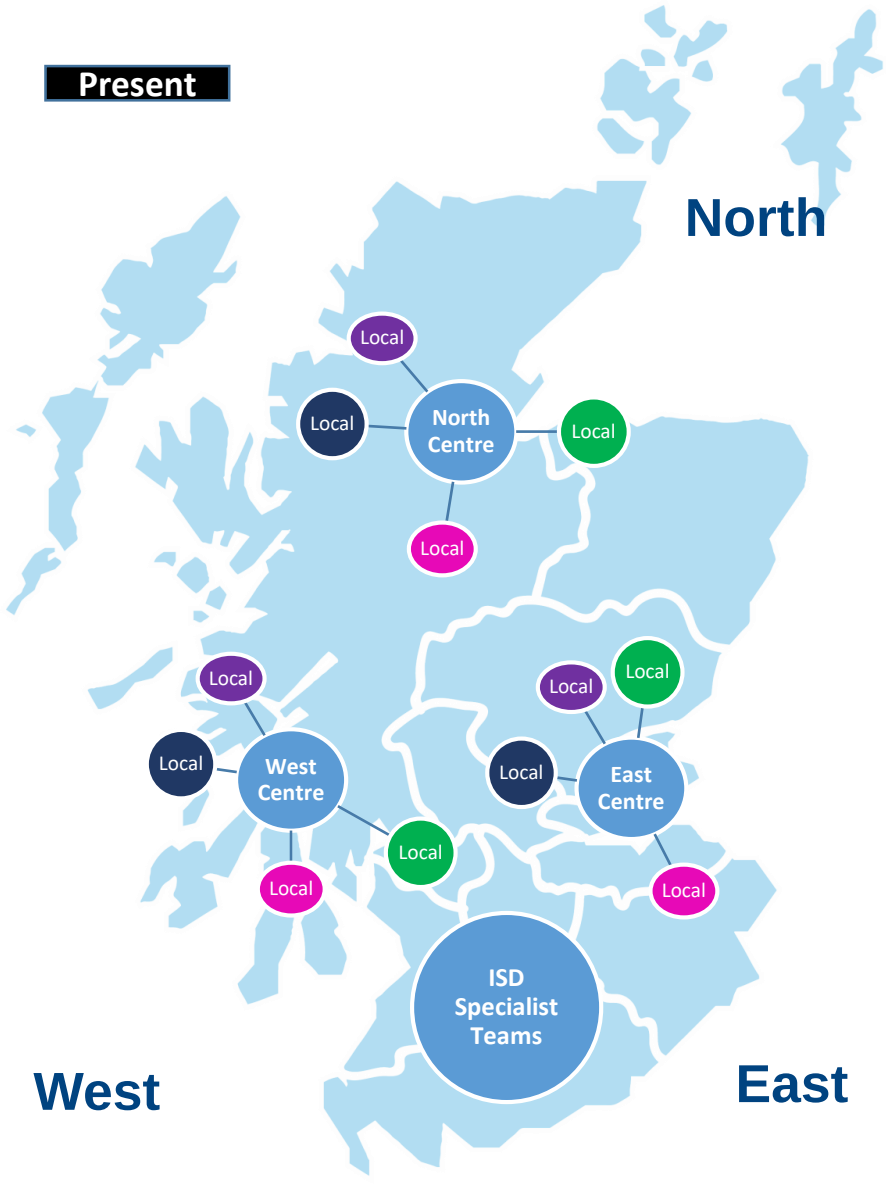
Data from cradle to grave



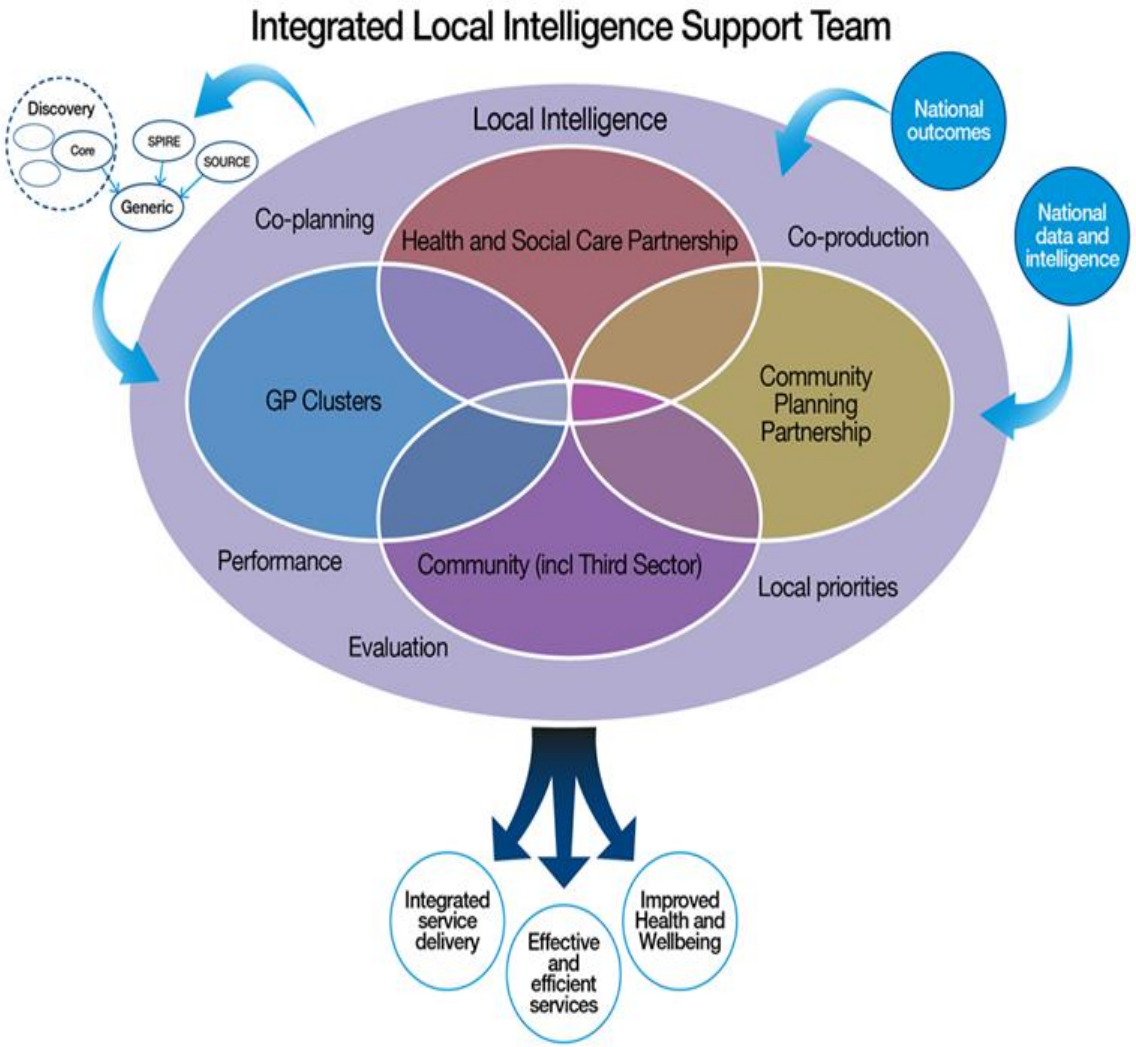
Most of our data sets offer 100% coverage

Local Focus


North
Local
Local
ISD Specialist Teams
West
East
Local
In the past


Present
North
Local
Local
North Centre
Local
Local
Local
Local
Local
West Centre
Local
Local
Local
East Centre
Local
Local
ISD Specialist Teams
West
East

How LIST are helping



approx 75+ wte staff

a range of skills and knowledge

- analytical
- information management
- project management

working across 31 Integration Authorities

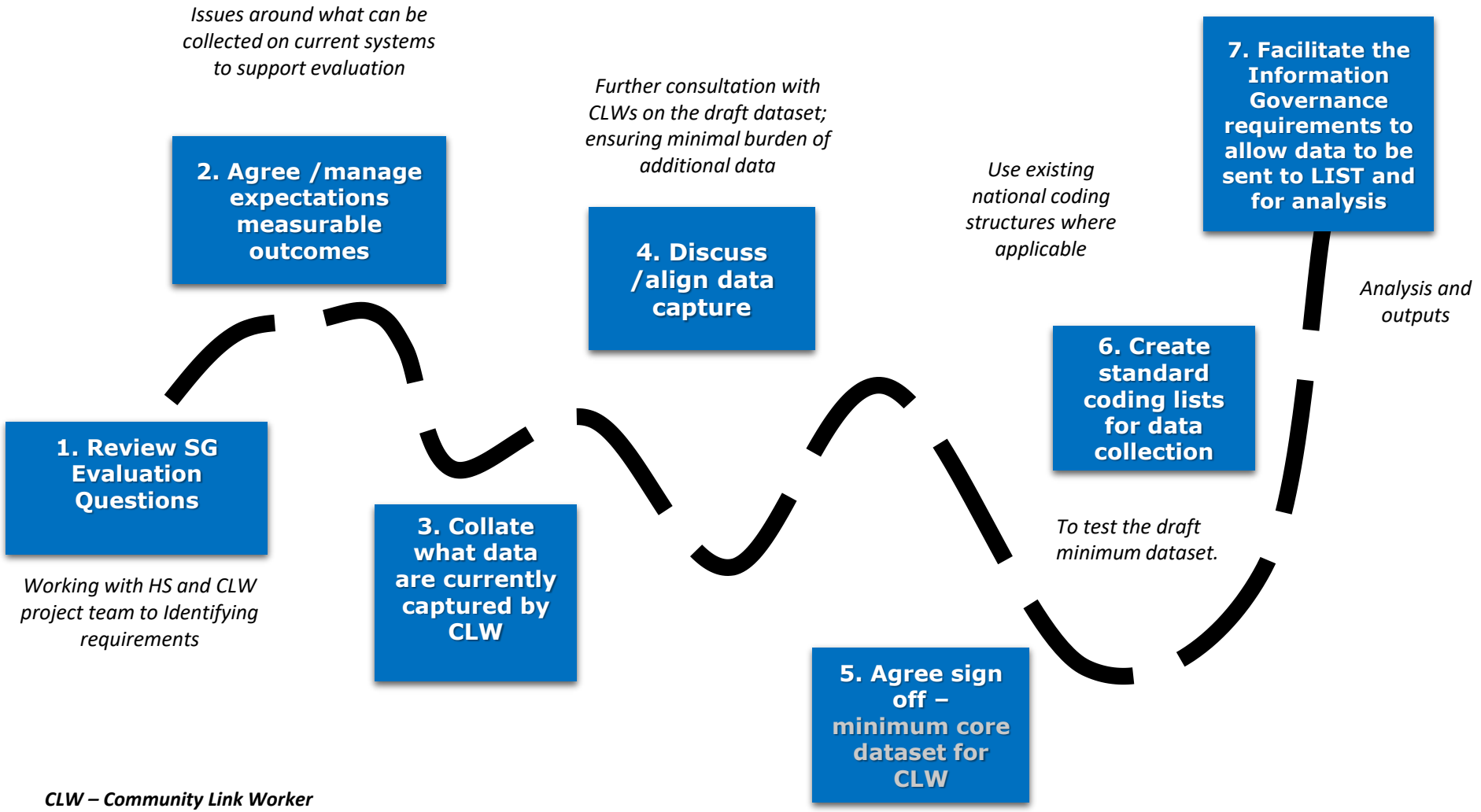
GP Clusters

Community Planning Partnerships, LAs, Third Sector

Community Link Worker Programme

Health Scotland
&
ISD LIST

Community Link Worker: project pathway



CLW – Community Link Worker
HS – Health Scotland
SG – Scottish Government

GDPR Art 5(2):
The controller shall be responsible for, and be able to demonstrate compliance with, the principles

GDPR Art 5(1)a. Fair & lawful
Lawful, fair and transparent

GDPR Art 5(1)b. Purpose limiting
Only use data for the reason you collected it. Further processing for research, science or statistics must have safeguards for the rights and freedoms of the data subjects

GDPR Art 5(1)c. Data minimisation
Only collect the data you need

Art 5(1)d. Accurate
Must be kept up to date.
Inaccurate data must be erased or rectified without delay.

GDPR Art 5(1)e. Storage limitation
Keep for no longer than necessary insofar as it will be processed for historical research, scientific or statistical purposes

GDPR Art 5(1)f. Security
Technical & organisational controls to ensure security of data incl. unauthorised or unlawful processing, accidental loss or damage

The Two Types of Personal Data

Personal data

- Name
- Identification number
- Location data
- Online identifier
- One or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person

Special category of personal data

- Racial or ethnic origin
- Political opinions
- Religious or philosophical beliefs
- Trade union membership
- Genetic data
- Biometric data for the purpose of uniquely identifying a natural person
- A natural person's sex life or sexual orientation

Minimum Core Dataset for Community Link Worker Programme

Consent to share information with NSS LIST
[*Information Governance prior to data sharing]*

- Practice code
- Unique patient programme identifier
- Age
- Gender
- Ethnicity
- SIMD /(Postcode)
- Non-English speaking
- Date of referral to CLW
- Referral route/source
- Reasons for referral
- Date first seen by CLW/1st Programme participation
- Reason not seen by CLW
- Repeat contacts/follow-up appointments
- Onward referral – resource type
- Availability of services/gaps in local service provision

Top 5 Referral Reasons (across age groups)

Age Group	Referral Reasons (by Largest Number of Referrals (Ascending))				
	1	2	3	4	5
All	Mental Health	Social Isolation	Anxiety	Benefits	Addiction
0-15	School	Family Relationships	Mental Health	Anxiety	Parenting
16-25	Mental Health	Anxiety	Social Isolation	Employment	Benefits
26-35	Anxiety	Mental Health	Benefits	Social Isolation	Employment
36-45	Mental Health	Anxiety	Addiction	Benefits	Social Isolation
46-55	Benefits	Mental Health	Addiction	Social Isolation	Housing
56-65	Social Isolation	Mental Health	Anxiety	Addiction	Long Term Conditions
66-75	Social Isolation	Depression	Weight Management	Benefits	Carer
Over 75	Social Isolation	Weight Management	Depression	Carer	Long Term Conditions

Example GP Practice Profiles

Select practi | Select comparato: NHS FORTH VALLEY

Demographics	Selected practice	Comparator	% Difference from comparator	% Change from last
List size	£2,365	£2,737	-13.6%	↓ 17.1%
% in Most deprived	£5,626	£6,656	-15.5%	↑ 8.0%
% aged 65+	£4,509	£5,162	-12.6%	↓ 6.3%
% aged 75+	£12,268	£11,816	+3.8%	↑ 5.3%

A&E	Selected practice	Comparator	% Difference from comparator	% Change from last
Rate of Attendance at	£14.56	£14.65	-0.6%	↓ 13.0%
65+ Rate	£30.48	£29.88	+2.0%	↑ 13.6%
GP referral Rate	£50.82	£51.43	-1.2%	↑ 0.4%
% Conversion	£51.53	£48.88	+5.4%	↑ 10.2%
Bed days rate (all ages)	£14.56	£14.65	-0.6%	↓ 13.0%
Bed days rate (65+)	£30.48	£29.88	+2.0%	↑ 13.6%
Falls admissions (65+)	£50.82	£51.43	-1.2%	↑ 0.4%
Out of hours	xxxx	xxxxx	xx	
28-day readmissions	£51.53	£48.88	+5.4%	↑ 10.2%

Cost per 1,000 list size by BNF Chapter	Selected practice	Comparator	% Difference from comparator	% Change from last
1 Gastro-intestinal	£2,365	£2,737	-13.6%	↓ 17.1%
2 Cardiovascular system	£5,626	£6,656	-15.5%	↑ 8.0%
3 Respiratory system	£4,509	£5,162	-12.6%	↓ 6.3%
4 Nervous system	£12,268	£11,816	+3.8%	↑ 5.3%
5.1 Antibacterial drugs	£776	£809	-4.0%	↓ 6.5%
6.1 Drugs used in	£3,889	£3,819	+1.8%	↑ 9.4%

Cost per treated patient by BNF Chapter	Selected practice	Comparator	% Difference from comparator	% Change from last
1 Gastro-intestinal	£14.56	£14.65	-0.6%	↓ 13.0%
2 Cardiovascular system	£30.48	£29.88	+2.0%	↑ 13.6%
3 Respiratory system	£50.82	£51.43	-1.2%	↑ 0.4%
4 Nervous system	£51.53	£48.88	+5.4%	↑ 10.2%
5.1 Antibacterial drugs	£7.88	£8.24	-4.4%	↑ 2.6%
6.1 Drugs used in	£103.31	£94.09	+9.8%	↑ 7.5%

Long Term Conditions (Rate per 1,000)	Selected practice	Comparator	% Difference from comparator	% Change from last
COPD	£14.56	£14.65	-0.6%	↓ 13.0%
Diabetes	£30.48	£29.88	+2.0%	↑ 13.6%
Depression	£50.82	£51.43	-1.2%	↑ 0.4%

Outpatient Appointments Rate per 1,000	Selected practice	Comparator	% Difference from comparator	% Change from last
All Outpatient	£14.56	£14.65	-0.6%	↓ 13.0%

To Improve the Process of Identifying and Management of Prediabetic Patients at Whinpark Medical Practice

Edinburgh & Lothians Health Foundation

By: Jennifer Boyd, Pauline Oh and Calum Massie

LothianQuality NHS

Background

The current processes to both identify and manage prediabetic patients are lacking or inconsistent in Primary Care. Therefore implementing early intervention with this cohort of patients, such as monitoring blood sugar levels and providing intensive lifestyle management to prevent the progression into Type 2 Diabetes, is challenging.

A standard clinical guidance and IT report within GP systems in Lothian will improve accuracy, consistency and efficiency.

Aim

100% of prediabetic patients registered at Whinpark Medical practice will be Read coded with a prediabetic diagnosis code. These patients will be put on the annual call and recall process by June 2020.

Measurement of Improvement

↑	Data quality
↑	Number of correctly coded prediabetic patients
↑	Number of coded annual reviews completed (Review code not being used currently)
↑	Patient response to recall invites
↓	Reduce processing time (currently 30 minutes per month)

Process Map

Tools

- Process Map
- MS Excel
- Run Chart
- Conversation with practice
- PDSA

Tests of change

- Creation of SPIRE Prediabetic Report
- Communication methods - text messages, prescription notes, leaflet and GP IT system pop up
- Engage with local pharmacists

Effects of change

- Improve clinical management of prediabetic patients leading to better outcomes
- Reduce Type 2 Diabetes through early intervention
- Rolling out to Cluster, Lothian and across Scotland (!!)

Lessons learned and message for others

- Involve service users and practice staff at an early stage
- Build a strong support network and make use of expertise from: Scottish Government, Lothian MCN for Diabetes, ISD SPIRE team and Practice staff

Multi-agency working in Argyll and Bute

LIST is working on the evaluation of a project that **is a collaboration** between a **social prescribing charity** (their programmes are geared around becoming more active), **a GP practice** and **the OT & Physio departments of the local hospital**.

The **client group** is made up of people who are on the scale of **at risk of becoming frail through to people with moderate frailty.**

The evaluation is looking to see if there is **a change in health activity & potentially costs** (looking at prescribing, primary contacts, outpatients, inpatient elective & emergency),
and possibly also looking at **changes in social care activity** (number of home care hours/week) in the year before and the year after starting the programme.

The analysis **will compare the client group** with a matched cohort **of 'equivalent' people (5 controls for each client,** taken from the whole of Scotland using the Source individual files).

Background

Source

Local Intelligence Support Team

Support Integration Authorities with Strategic Planning by;

- ✓ Providing data and analytical support
- ✓ Help to evaluate services, through providing evidence for change
- ✓ Help to transform data into evidence for action

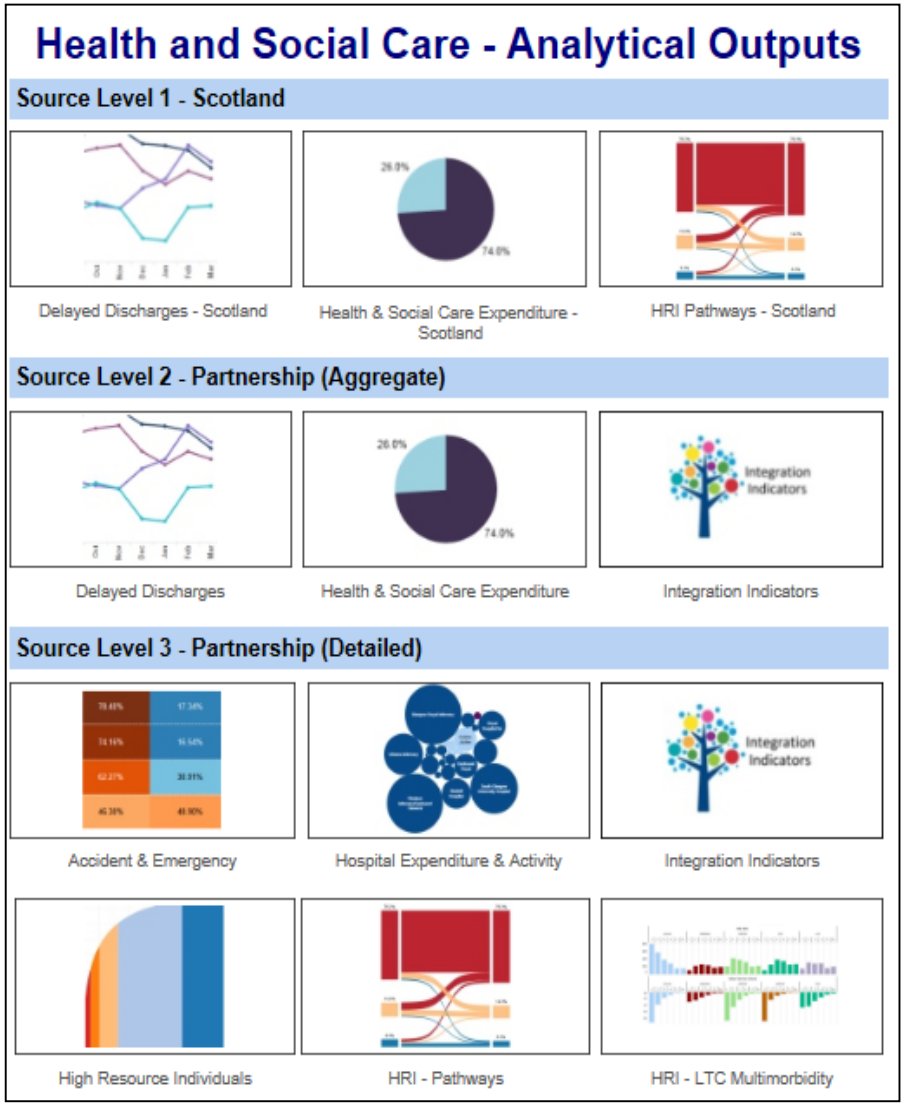
Source Linkage Data

- CHI Demographics
- Hospital/Hospice activity
  - Inpatients & Day cases
  - Delayed discharges
  - Outpatients
  - A&E
- Community Health
  - District Nursing
  - Community Mental Health
- Unscheduled Care
  - GP Out of Hours
  - NHS 24
  - Ambulance Service
- NRS Deaths
- Cancer Registrations
- Social Care
  - Care Home
  - Home Care/Reablement
  - Alarms & Tele-care
  - SDS
- Homelessness
- General Practice
  - Prescribing
  - Consultations
- Intermediate Care

Green – data available but not currently linked yet

Light blue - data not currently available but expected in future

Source Platform



- Users can access a series of interactive Tableau workbooks through the Source platform.
- Main users: H&SC Partnerships, Local Authorities, Health Boards, LIST team.
- Three levels of access
- 16 Workbooks
- Over 100 Dashboards
- Approx 200 users
- Across 30 Partnerships

Health and Social Care Pathways

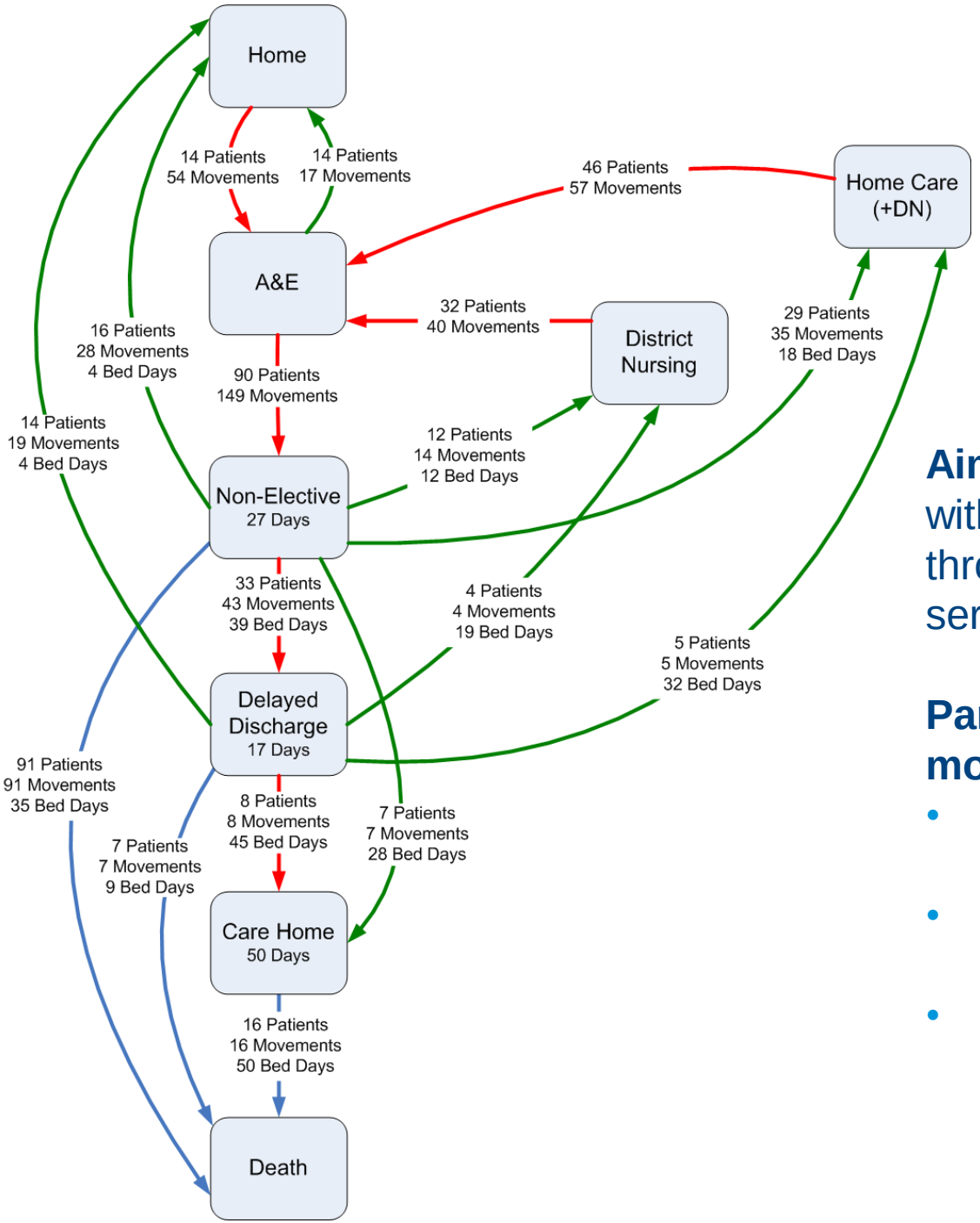
Pathway Aims

Understand how individuals flow through and between different Health and Social Care services in a highly accessible and story-driven format.

Using **innovative** techniques, in “Data Science”, we can use longitudinal data to visualise pathways of care.

Utilise novel process mining techniques to:

- **Evaluate** current care pathways
- **Engage** with local service managers, clinicians etc.
- **Establish** alternative models of care

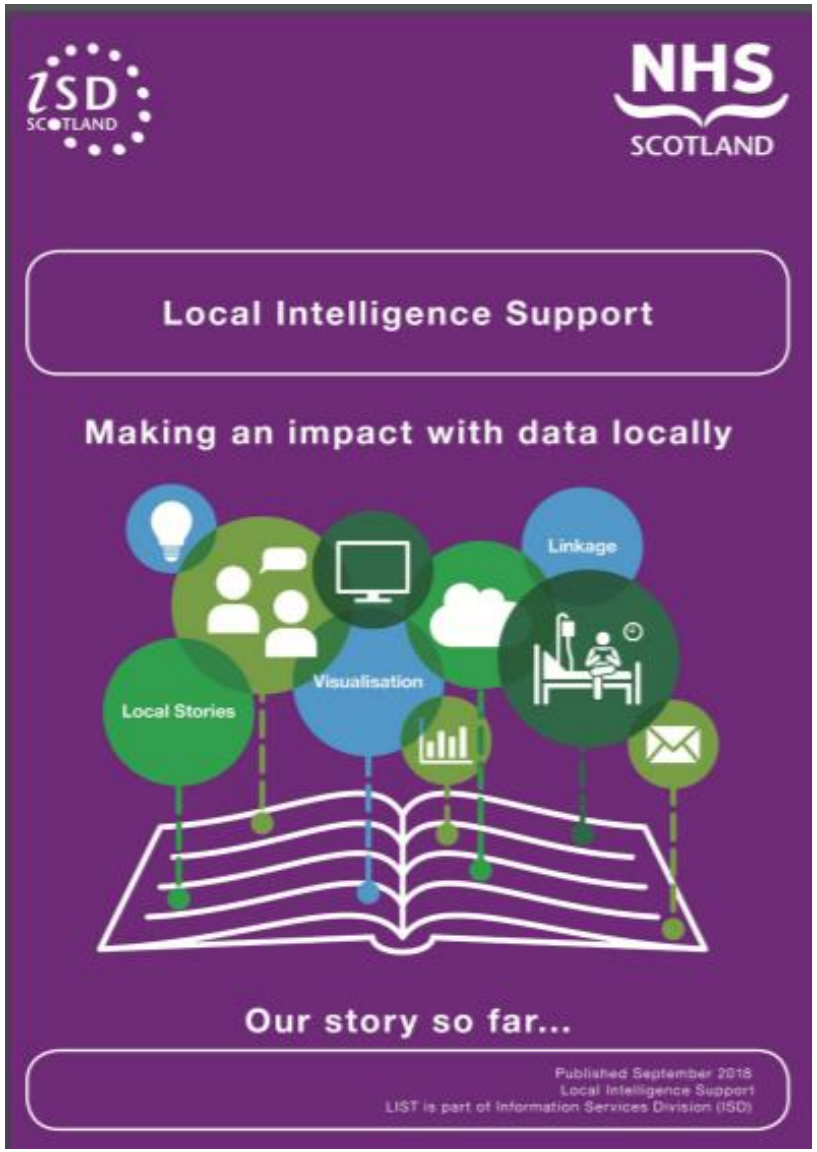


Aim: Provide partnerships with models reflecting flow through and between H&SC services.

Partnerships use these models to:

- Evaluate current care pathways
- Establish alternative models
- Support engagement with service managers, clinicians etc

Local Intelligence Support – Our Stories

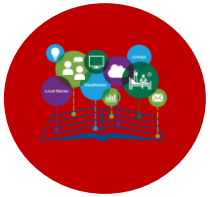


Health and Social Care Partnerships

GP Clusters

Local Authorities

Community Planning Partnerships



Third Sector

https://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Local-Intelligence-Support-Team/_docs/LIST-Our-Stories-V1-1.pdf?2


"NO ONE EVER MADE A DECISION BECAUSE OF A NUMBER. THEY NEED A STORY."
DANIEL KAHNEMAN
NOBEL LAUREATE (ECONOMICS)

Thank you

Contact:

NHS.LIST@nhs.net