

Towards a National Cancer Intelligence Framework

Cancer Data CIC

Collider Event 12 October 2017

Hilary M Dobson, OBE

Innovative Healthcare Delivery Programme

Farr Institute @ Scotland

Strategic Policy



BETTER CANCER CARE, AN ACTION PLAN

2008

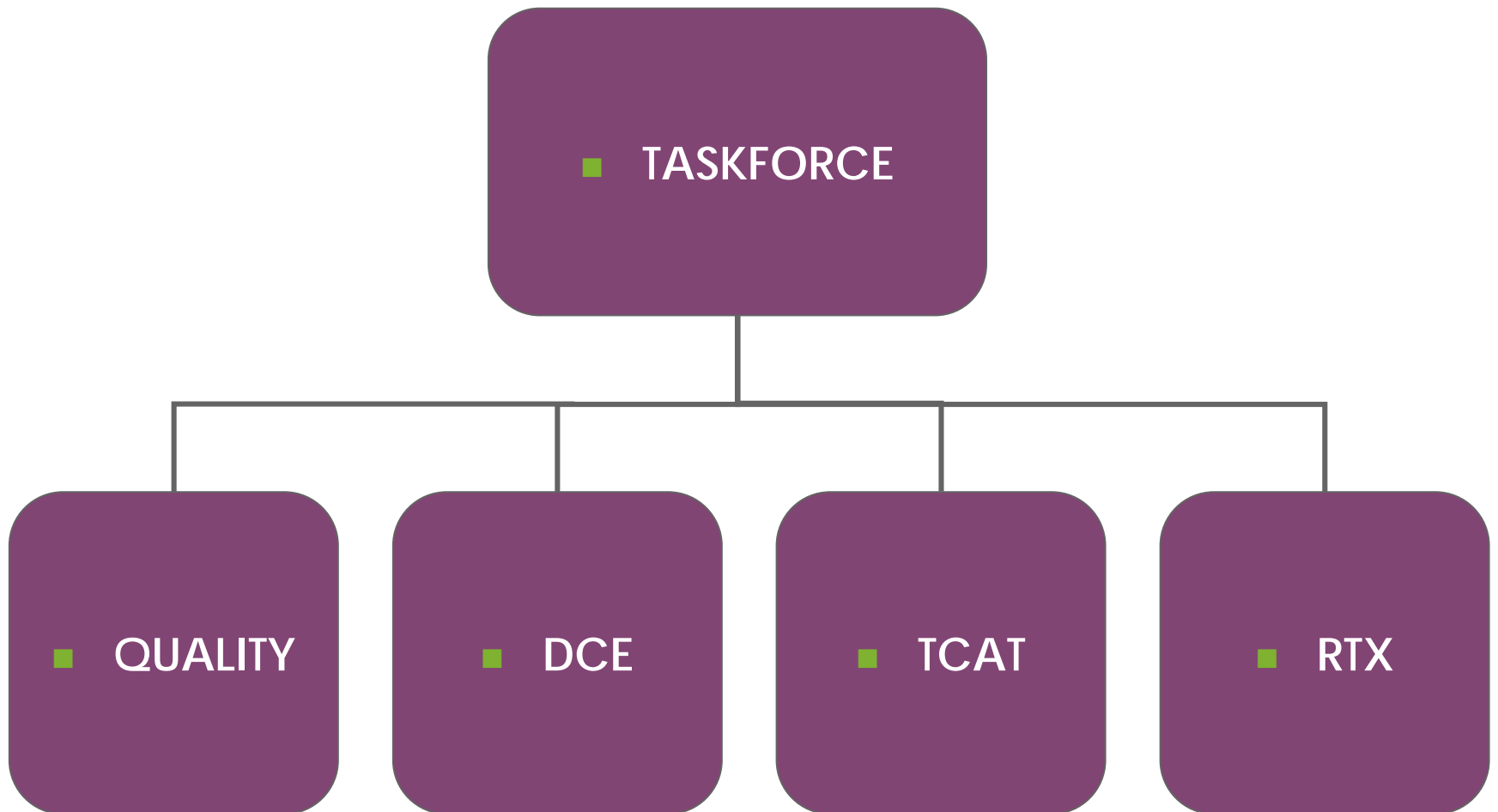
BEATING CANCER: AMBITION AND ACTION



The Scottish Government
March 2016

March, 2016

CANCER PLANNING IN SCOTLAND



Cancer in Scotland



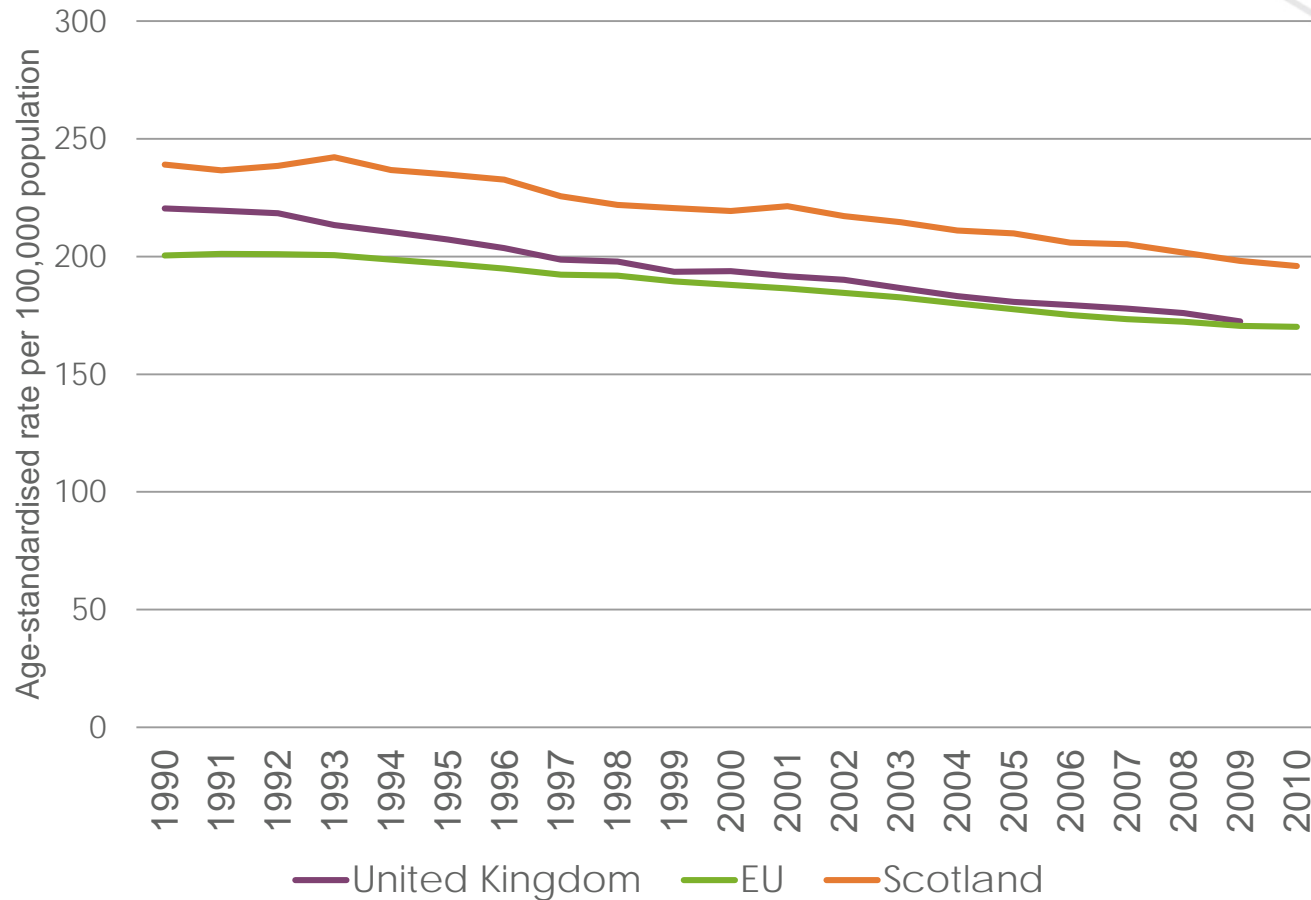
- Scottish Government
- 14 Health Boards
- 3 Managed Cancer Networks – Regional
- 3 Managed Cancer Networks – National
- 1 Managed Service Network (CTYA Cancer)

Managed Clinical Cancer Networks

- Tumour specific:
 - breast, lung, upper GI, head & neck, gynae, skin, colorectal, urology, haem
- National – CNS, HPB, Sarcoma and NET
- Multidisciplinary and territorial
- Lay membership

Cancer mortality¹ in Scotland, UK and EU 1990-2010

Age-standardised mortality rate per 100,000 population (using ESP1976²)



Source: WHO/Europe and ScotPHO, Scotland and European HfA Database 2012

1. All cancers (ICD-10 C00-C97)
2. 1976 version of the European Standard Population

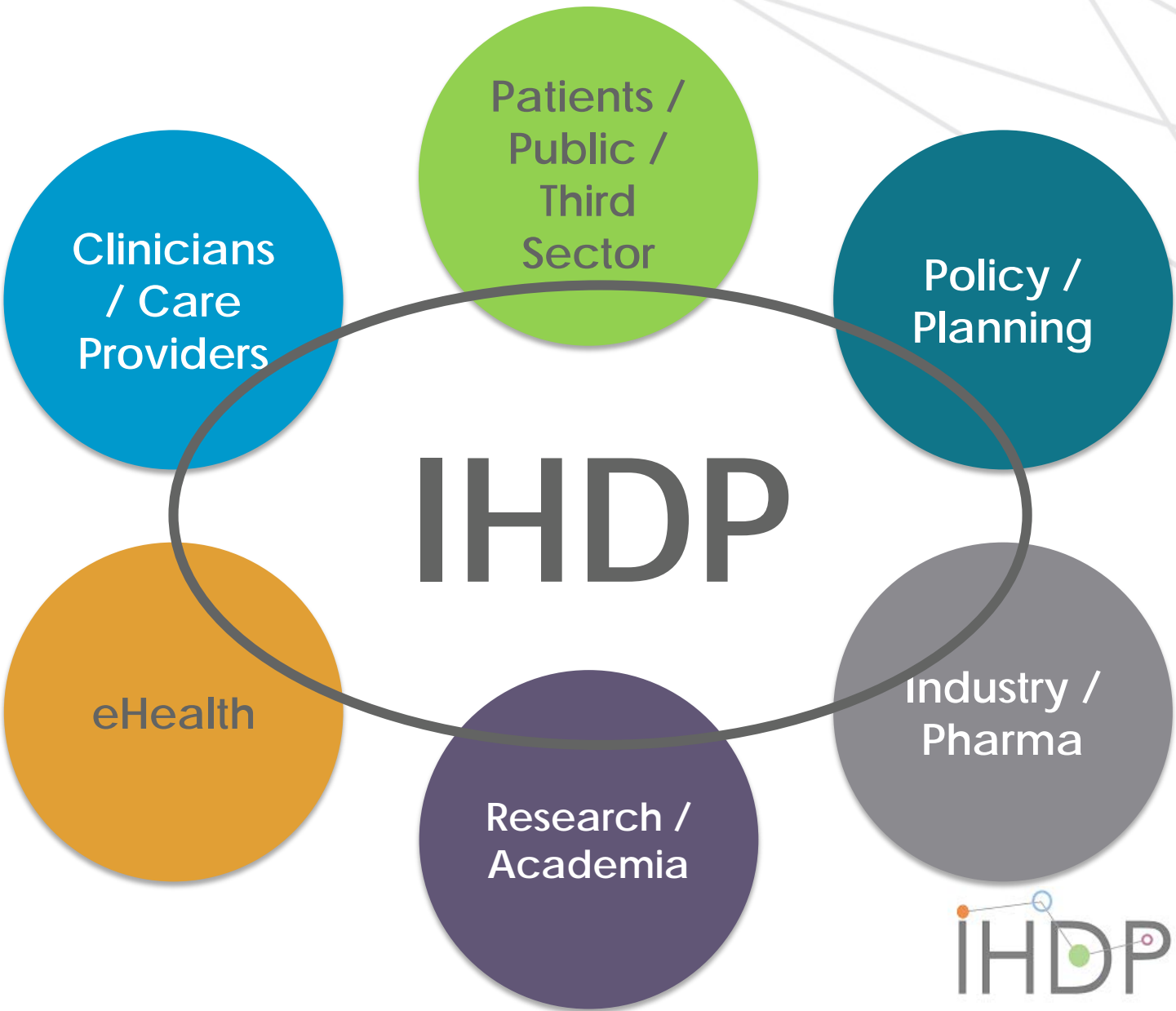
IHDP High Level Aims

- To harness and promote healthcare informatics to deliver value to patients, healthcare professionals and the NHS through collaboration with academia, industry and the third sector
- To act as a 'translational hub' between informatics and the NHS, Government, patients and citizens in Scotland
- To describe and demonstrate the benefits of achieving a Nationwide Learning Health System
- As a first priority **to develop a national cancer data infrastructure for Scotland, linking primary, secondary, and ultimately social, care data to improve patient outcomes.** This is the demonstrator workstream to inform the application of the IHDP's approach to other conditions

IHDP

Opportunity for NHS Scotland to build on recent developments/investments in

- Informatics
- Data analytics
- Digital health
- Genomics
- Stratified medicines



IHDP

Clinicians / Care Providers

Patients / Public / Third Sector

Policy / Planning

Industry / Pharma

Research / Academia

eHealth



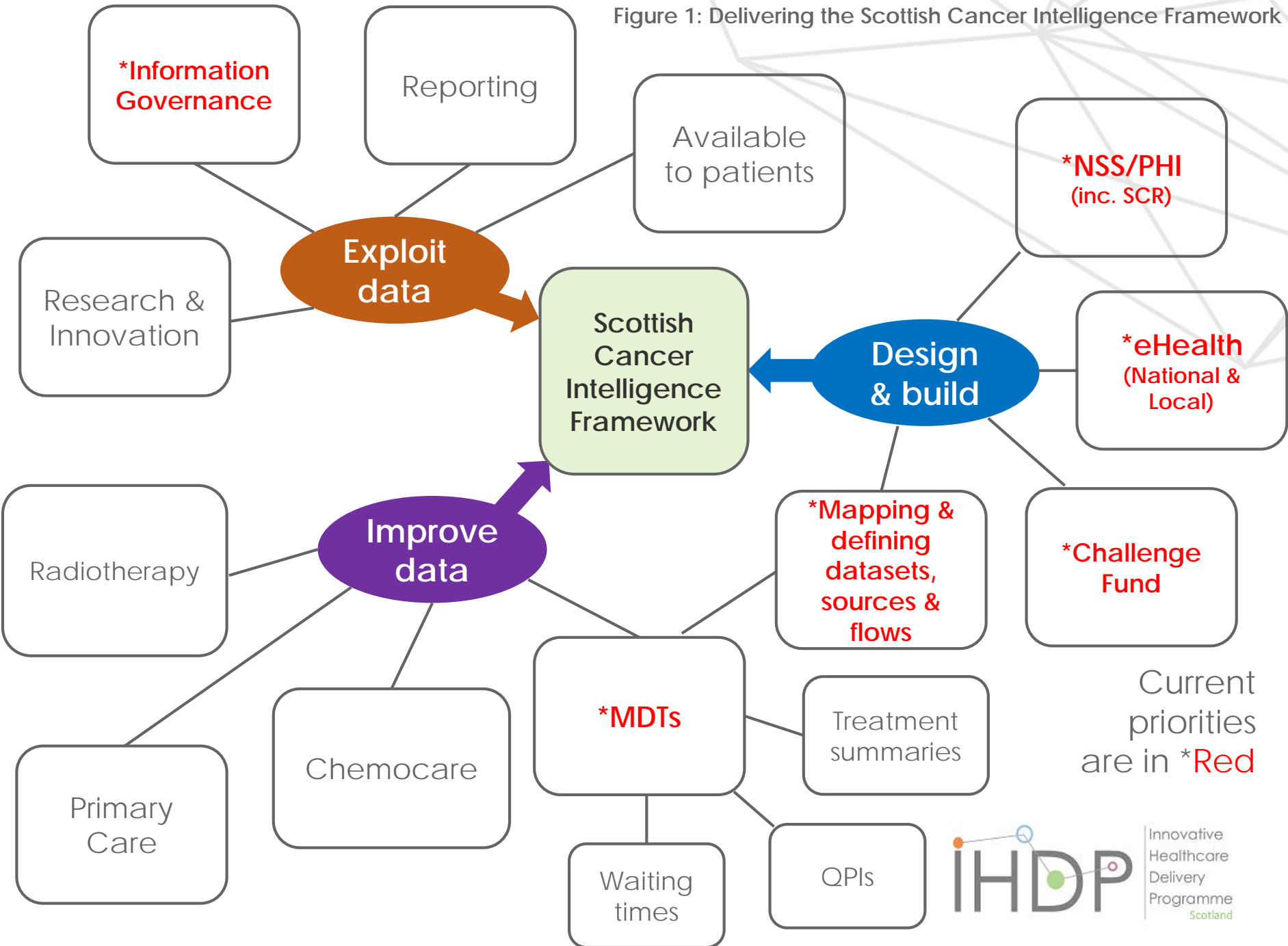
Innovative
Healthcare
Delivery
Programme
Scotland

Barriers

- Multiple heterogeneous datasets
- Technical
- Organisational

This is complex stuff!

Figure 1: Delivering the Scottish Cancer Intelligence Framework



Current priorities are in *Red

Scottish Cancer Intelligence Framework (SCIF)



Fully joined up data for discussion and sharing



(re)shape clinical care/government policy/research

Realising the cancer vision

QPI data

SACT data

Radiotherapy data

SPIRE

Other cancer data

Transparency at national level

Scottish Cancer Intelligence Framework

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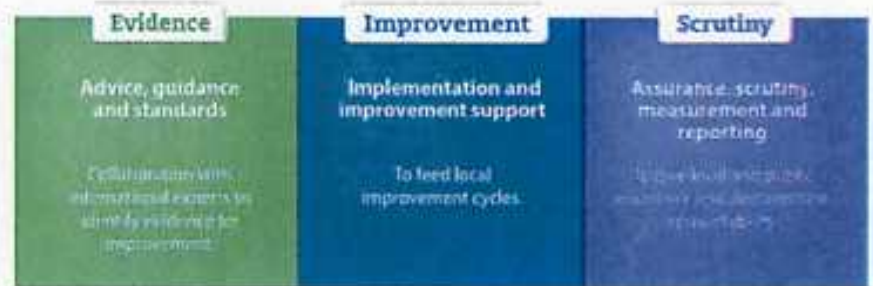
Scottish Cancer Intelligence Framework



The Healthcare Quality Strategy for NHSScotland

The Scottish Government, May 2010

Integrated cycle of improvement



What is a QPI?

- Actual or proxy measure of quality care
- Indicates key aspects of safe and effective care
- **Outcome-focussed**
- **Evidence based**
- **Measurable**
- Enable local self-assessment and reporting on progress



Cancer QPIs

- Tumour specific
- 10-14 for each tumour
- Definitions and measurability
- Presentation of data

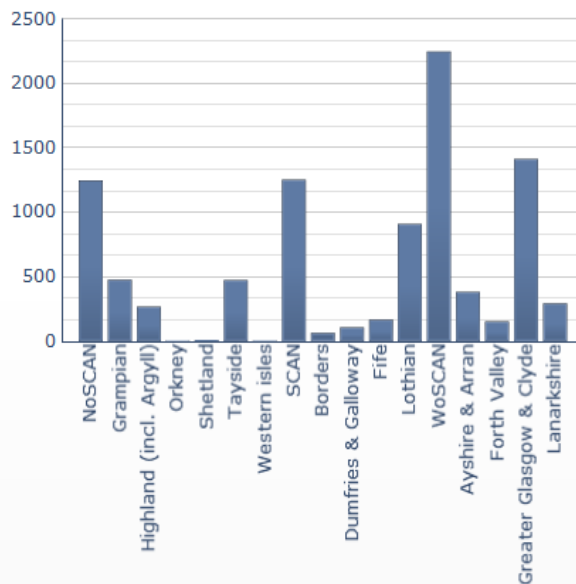


select Board row on Case ascertainment table to view referral & demographic details for board; click on data column to change detail in corresponding case ascertainment graph.

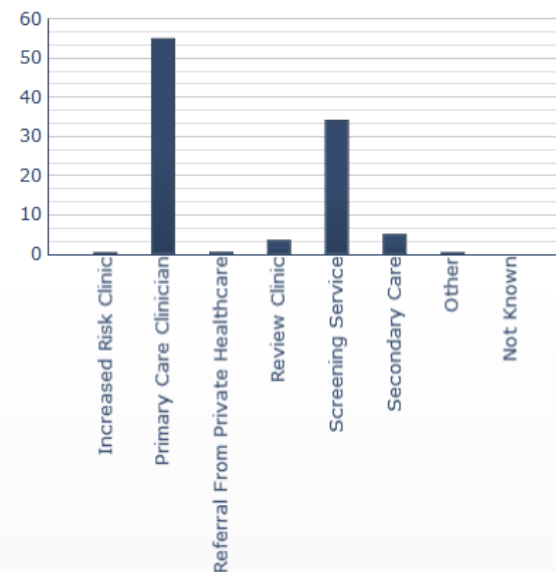
Close

Location	No. Of Aud	Cancer Re	Est %
Scotland	4,754	4,750	100.1
NoSCAN	1,163	1,248	93.2
Grampian	466	477	97.7
Highland (incl. Argyll)	263	269	97.8
Orkney	7	6	116.7
Shetland	10	13	76.9
Tayside	417	476	87.6
Western Isles	-	7	-
SCAN	1,227	1,255	97.8
Borders	68	67	101.5
Dumfries & Galloway	108	108	100.0
Fife	185	170	108.8
Lothian	866	910	95.2
WoSCAN	2,364	2,247	105.2
Ayshire & Arran	382	383	99.7
Forth Valley	203	154	131.8
Greater Glasgow & Clyde	1,423	1,415	100.6
Lanarkshire	356	295	120.7

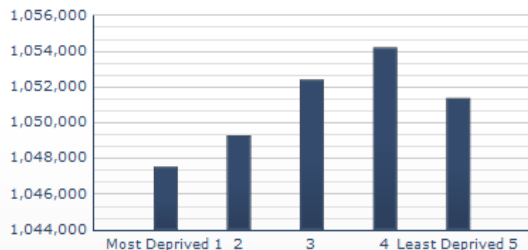
Cancer Reg Average (07-11)



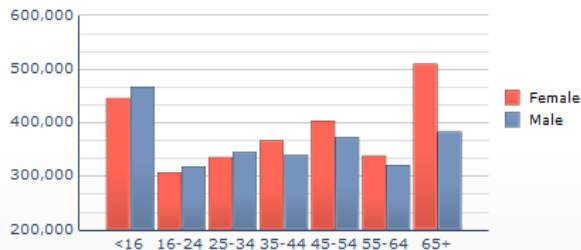
Source of referral (%): Scotland



SIMD distribution 2011 Scotland



Age/sex distribution 2011 Scotland

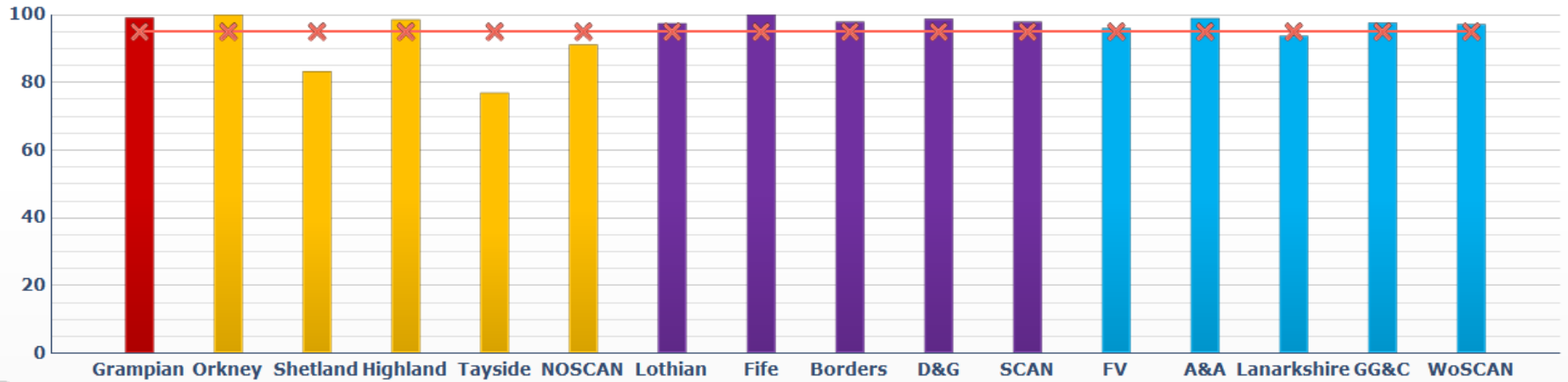


Source of referral (%)	Scotland
Increased Risk Clinic	0.6
Primary Care Clinician	55.0
Referral From Private Healthcare	0.7
Review Clinic	3.6
Screening Service	34.2
Secondary Care	5.2
Other	0.6
Not Known	0.0
Total	100.0

Data Dashboard – Breast Cancer

Hospital level **QPI 2: Pre-Operative Assessment of Axilla (i)** Target:95% All Indicators Hide/show Info box

QPI 2: Pre-Operative Assessment of Axilla (i) % Performance 2012



Sort	Grampian	Orkney	Shetland	Highland	Tayside	NOSCAN	Lothian	Fife	Borders	D&G	SCAN	FV	A&A	Lanarkshire	GG&C	WoSCAN	Scotland
% Performance	99	100	83	99	77	91	97	100	98	99	98	96	99	94	98	97	96
Numerator	351	5	5	207	237	805	654	134	47	79	914	143	283	240	1087	1753	3472
Denominator	354	5	6	210	308	883	671	134	48	80	933	149	286	256	1113	1804	3620
NR for Num	0	0	0	0	70	70	5	0	1	0	6	0	0	0	5	5	81
%NR for Num	0	0	0	0	23	8	1	0	2	0	1	0	0	0	0	0	2
NR for Excl	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
%NR for Excl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NR for Denom	0	0	0	0	1	1	1	0	0	0	1	0	0	0	3	3	5

Numerator: Number of patients with invasive breast cancer who undergo assessment of the axilla by ultrasound before surgery.

Denominator: All patients with invasive breast cancer undergoing surgery.

Exclusions: No exclusions.

Comments: Grampian - Should exclude operative diagnoses here as the QPI refers to pre-op assessment. Shetland - 1 patient did not have an ultrasound but did have an MRI which showed no abnormalities in the axilla.

Cancer QPIs

- Example of breast QPIs.....



Breast Cancer QPIs (I)

- 10 month treatment pathway
- Diagnosed 1 Jan to 31 Dec
- Treatment completed October following year
- 6 months data completion
- First data report July following year
- Data cleaning
- Re-run data reporting October
- Action plan developed and agreed
- National meeting

Breast Cancer QPIs (II)

- 10 month treatment pathway
- Diagnosed 1 Jan to 31 December 2014
- National meeting January 2017
- **TIMELINESS!**

Realising the cancer vision

QPI data

SACT data

Radiotherapy data

SPIRE

Other cancer data

Transparency at national level

Scottish Cancer Intelligence Framework

SACT data problem

- ChemoCare (CEPAS) centrally funded in Scotland
- Roll out across WoSCAN, SCAN and NoSCAN between 2010 – 2012
- Same system but 5 instances across Scotland therefore comparable reports not available → no national picture



What is the solution?

Cancer Data CIC.....

- a modern and innovative approach to data integration where silos of data are integrated without moving or duplicating the data
- the solution must add 'real value'
- the solution must be compatible with NHS Scotland's systems and be 'scalable'
- the solution must be found within the current system of Information Governance