

Scope of the possible with Power BI

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Welcome

- this session is a **non-technical overview** designed for service leads
- we'll get going properly at 15.05
- if you can't access the chat, you might need to join our Teams channel:

tinyurl.com/kindnetwork

The KIND network

- a social learning space for staff working with knowledge, information, and data across health, social care, and housing in Scotland
- we offer social support, free training, mentoring, community events, ...
- Teams channel / mailing list

Session outline

- Why Power BI, and why this session?
- Power BI demo - build a simple dashboard
- Strengths and weaknesses
 - obvious
 - less obvious
- Alternatives
- Skill development

Power BI?

- new (c.2015)
- based on Microsoft's SQL reporting products
 - proprietary, closed-source, paid-for
- integrates functions from several other Microsoft data products (bits of Excel, PowerPivot, PowerQuery...)
- produces interactive dashboards

Why this session?

Power BI demo

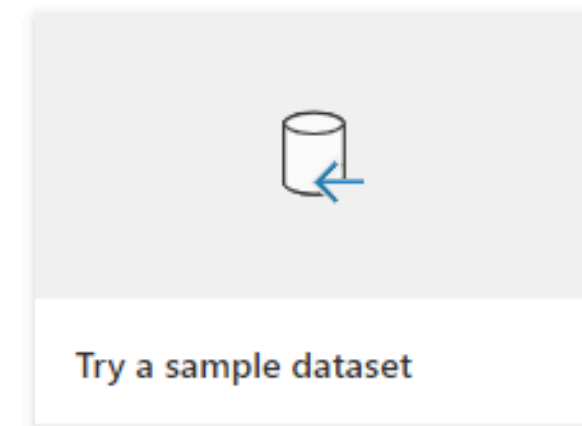
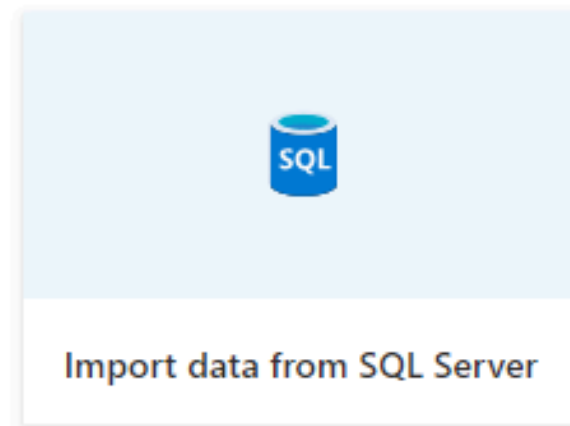
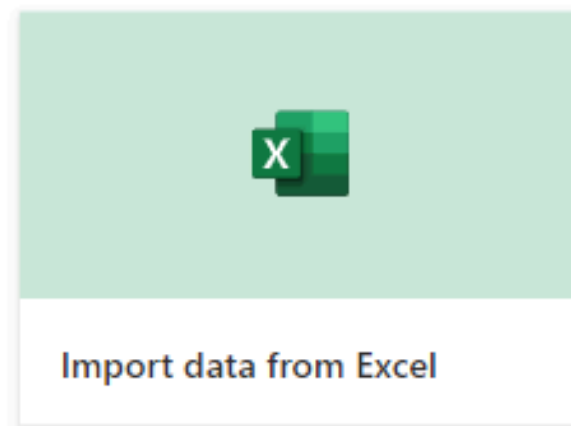
- using GP practice size data

Name	ListSize	Postcode	DataZone	HBName	SIMD2020v2_quantile
Ballachulish Medical Practice	1558	PH49 4JB	S01010526	NHS Highland	5
Tor Medical Group	3508	FK7 8DW	S01013026	NHS Forth Valley	2
The Red Practice	4222	PH7 3SA	S01011870	NHS Tayside	3

Load some data

Add data to your report

Once loaded, your data will appear in the **Data** pane.



Get data from another source →

Lots of different data loading options

Preview

Navigator

Search:

Display Options

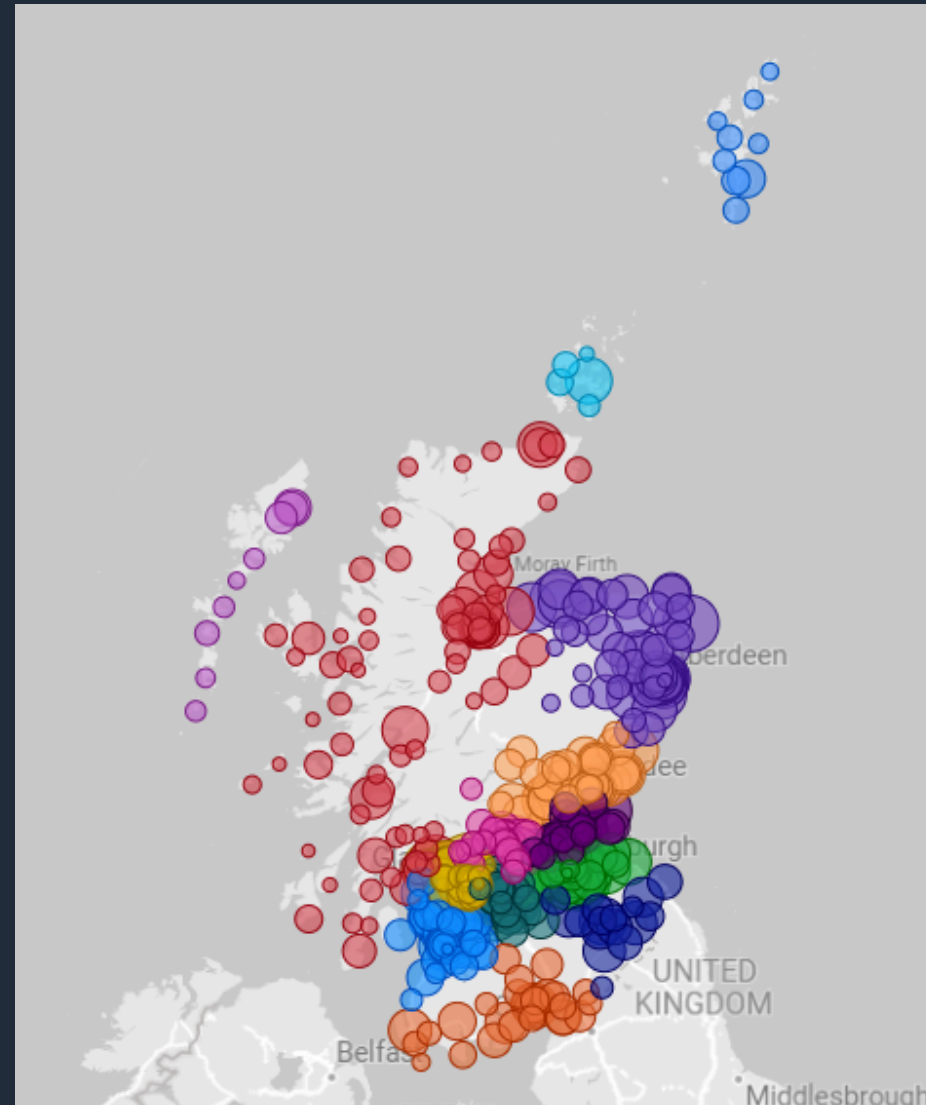
- april_2024_clean.xlsx [2]
 - gps
 - gp_pract_data

gps

Name	PracticeListSize	Postcode	HBName
Muirhead Medical Centre	8251	DD2 5NH	NHS T
The Blue Practice	7272	PH7 3SA	NHS T
Aberfeldy And Kinloch Rannoch Medical Practice	4843	PH15 2BL	NHS T
Grove Health Centre	6429	DD5 1DU	NHS T
Alyth Health Centre	4590	PH11 8EQ	NHS T
Arbroath Medical Centre LLP	9901	DD11 1AD	NHS T
The Abbey Practice	7001	DD11 1EN	NHS T
East Practice, Springfield Medical Centre	4978	DD11 1ES	NHS T
West Practice, Springfield Medical Centre	8586	DD11 1ES	NHS T
St Margaret's Health Centre	10870	PH3 1JH	NHS T

Friendly tools for previewing data

Add to a map



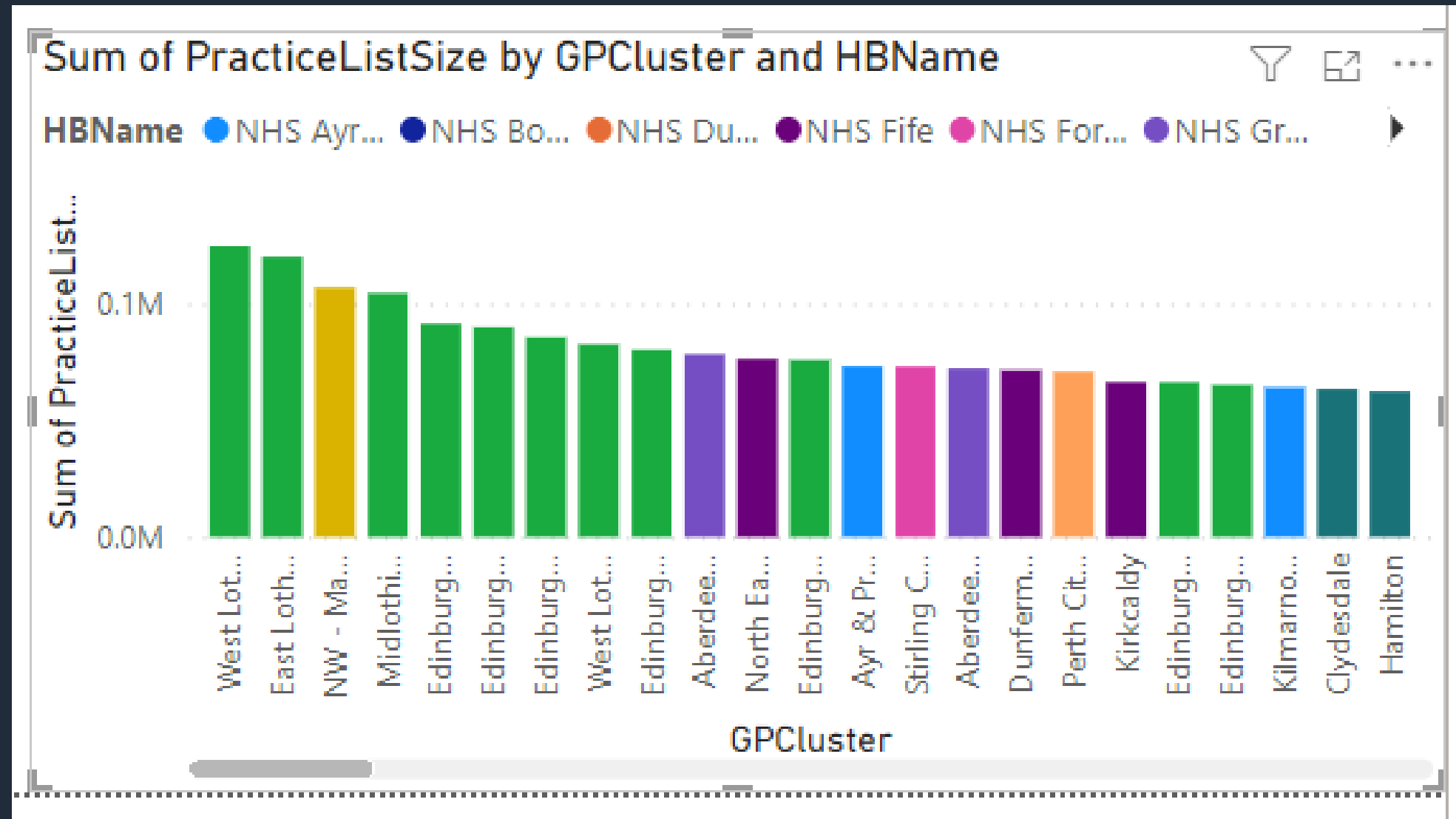
Clever use of commercial postcode data

Add interactions

The screenshot shows a data visualization interface with a top navigation bar containing tabs for 'sert', 'Calculations', 'Sensitivity', and 'Share'. Below the navigation bar, there are two filter sections. The first section is for 'HBName' and contains a dropdown menu currently set to 'All'. The second section is for 'PracticeListSize' and features two input boxes with the values '24' and '61612'. Below these input boxes is a horizontal slider with circular handles at both ends, indicating a range of values. To the right of the filter sections, there are icons for a funnel (filter), a chart (visualize), and a menu (three dots).

Visualisations are interactive

Add more visuals



30-odd built in, hundreds of free additional visuals, thousands of (often dodgy) commercial add-ins

Add more data

File Origin		Delimiter		Data Type Detection								
65001: Unicode (UTF-8)		Comma		Based on first 200 rows								
_id	Date	PracticeCode	HB	HSCP	Sex	SexQF	AllAges	AllAgesQF	Ages0to4	Ages0To4QF	Ages5to14	A
1	20230701	10002	S08000030	S37000007	Male		4114		189		467	
2	20230701	10002	S08000030	S37000007	Female		4238		174		418	
3	20230701	10002	S08000030	S37000007	All	d	8352		363		885	
4	20230701	10017	S08000030	S37000033	Male		3468		123		357	
5	20230701	10017	S08000030	S37000033	Female		3409		106		317	
6	20230701	10017	S08000030	S37000033	All	d	6877		229		674	
7	20230701	10036	S08000030	S37000033	Male		2428		90		219	
8	20230701	10036	S08000030	S37000033	Female		2404		62		209	
9	20230701	10036	S08000030	S37000033	All	d	4832		152		428	

Totally different data, but harmonised process for loading

Re-shape that data

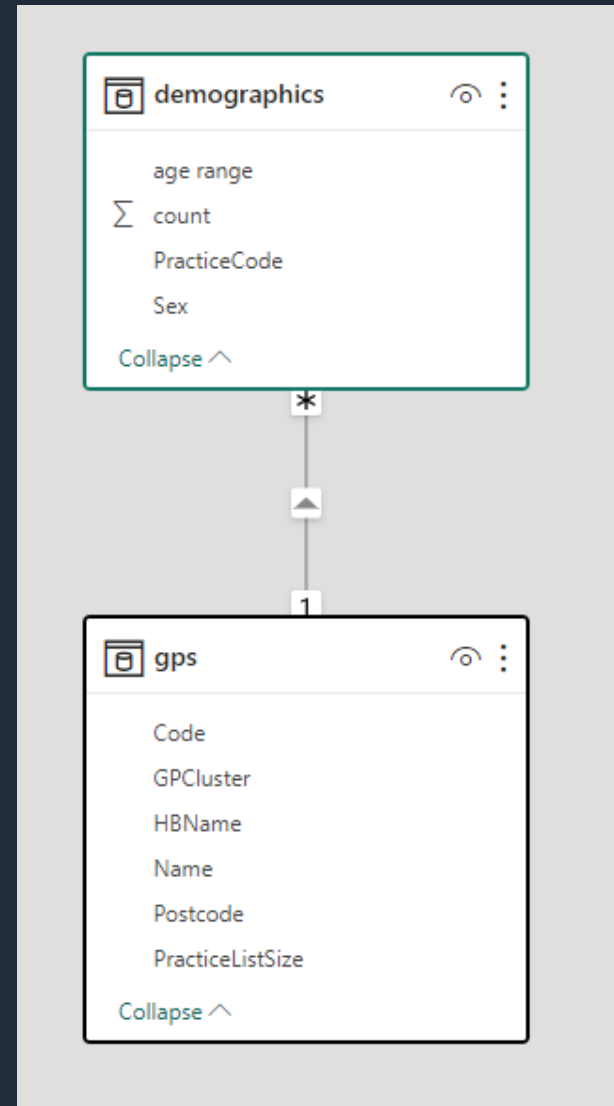
Query | Data Sources | Parameters | Query | Manage Columns | Reduce Rows | Sort | Transform

`= Table.RenameColumns("#Replaced Value2",{"Value", "count"}, {"Attribute", "age range"})`

	PracticeCode	Sex	age range	count
1	10002	Male	0 to 4	189
2	10002	Male	5 to 14	467
3	10002	Male	15 to 24	418
4	10002	Male	25 to 44	968
5	10002	Male	45 to 64	1180
6	10002	Male	65 to 74	490
7	10002	Male	75 to 84	304
8	10002	Male	85 plus	98
9	10002	Female	0 to 4	174
10	10002	Female	5 to 14	418

Neatly-integrated PowerQuery, gives loads of scope for tidying and fixing data

Data modelling tools




Full suite of relational tools for the more ambitious projects


Pre-packed visuals

All visuals Organizational visuals AppSource visuals

Explore all available visuals to magnify your business insights [Learn more](#)

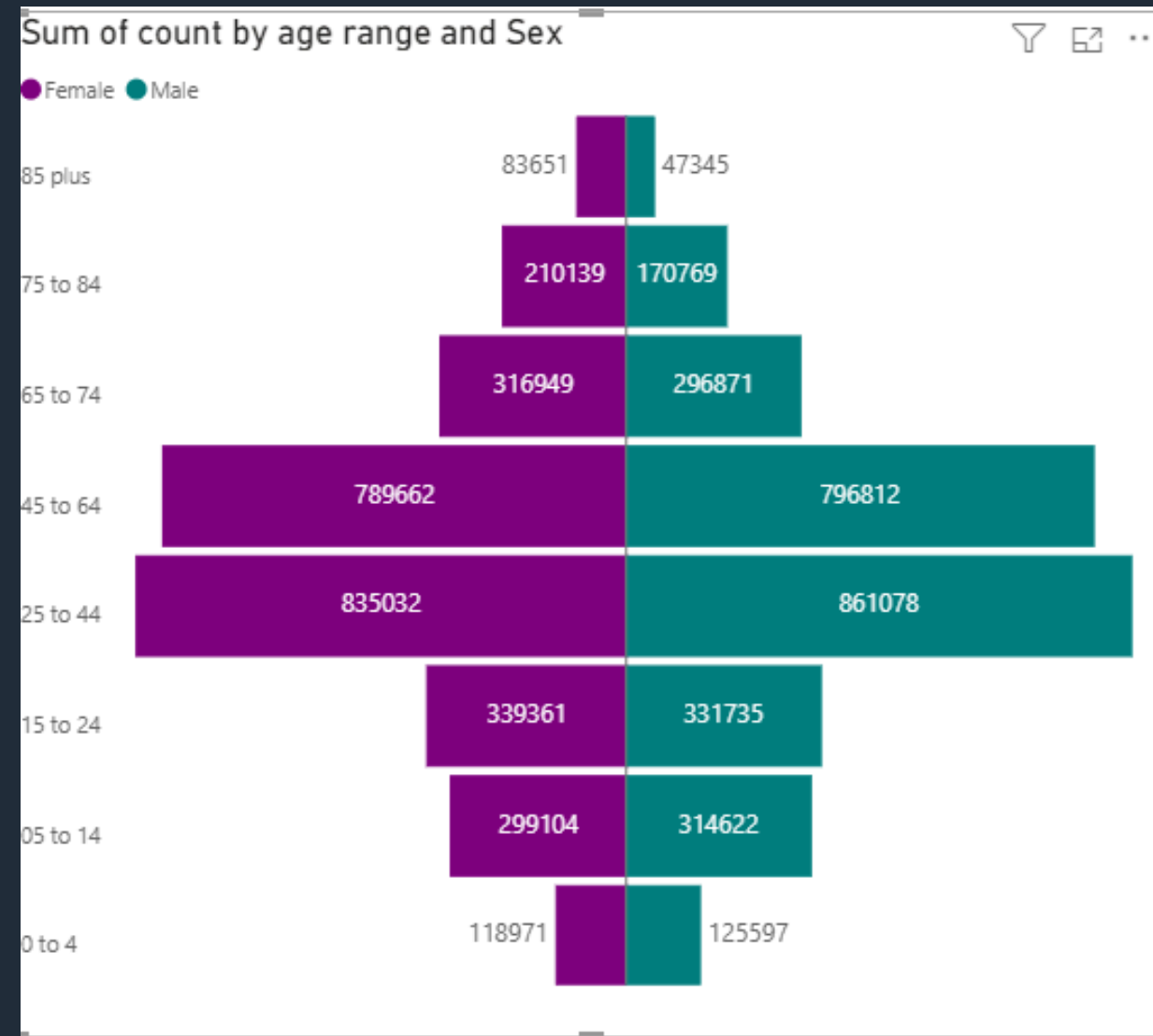
Filter by



Tornado chart 
Microsoft Corporation
★★★★★ (55)

Microsoft's Tornado chart

Demographics



These can be cross filtered to give national/board/practice level insights

Strengths

- by far the easiest way of producing interactive data products
- great tools for tidying data
- good for iterative projects
- data hubbing / self-service data
- scaling
- potential to manage complex and sensitive data on existing infrastructure

Weaknesses

- really needs clean and tidy data
- publication can be complicated and expensive
- steepening pain curve. Easy to start projects, but more involved analysis is messy
- complex IG landscape
- messy skills development journey

Skill development

Chat, queries, questions

- Teams channel: tinyurl.com/kindnetwork
- weekly email update: tinyurl.com/kindupdate
- get in touch: brendan.clarke2@nhs.scot
- session feedback link at resource page