Public Health England

Protecting and improving the nation's health

Practical Guidance to SPOT for Improving Sexual and Reproductive Health

2017 Guidelines for Local Authorities

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Introduction

What is SPOT?

The Spend and Outcome Tool (SPOT) was first published in 2014 and gives an overview of spend and outcomes across key areas of business for Local Authorities (LAs). It uses previously published data on both spend and outcomes. It contains three years of data on spend and outcomes for a wide range of measures. SPOT can be used to compare with other geographical areas and a range of benchmarks.

SPOT can be a useful tool for LAs who are interested in comparing spend data on sexual and reproductive health with sexual and reproductive health outcomes. There are some issues which make drawing these comparisons complicated and potentially misleading. This guidance provides step by step guide for LAs about how to use SPOT, including:

- the potential breadth of issues hindering comparisons between outcomes and spend
- how to identify if the spend and/or outcomes data for their LA is suitable for drawing comparisons from
- next steps for interpretation where data comparisons can be made
- how to prevent misinterpretation

What data is available on sexual and reproductive health?

Sexual and reproductive health spending data from Local Authorities is split into three categories; ‘Contraception’, ‘Sexually transmitted infection (STI) testing and treatment’ and ‘Advice, prevention and promotion’. This data comes from the revenue account (RA)* allocation or revenue outturn (RO)*[1] reported by local authorities. More information is available in the Service Reporting Code of Practice.

Outcome data is available from national data sources for a wide range of sexual and reproductive health outcomes, see table 1 for the full list.

[1] RA is the reported budget for a given year and RO is the reported spend for the year.

Table 1. Outcome data available on SPOT for sexual and reproductive health

- Abortions under 10 weeks
- Chlamydia detection rate (15-24 year olds – Female)
- Chlamydia detection rate (15-24 year olds – Male)
- Chlamydia detection rate (15-24 year olds – Persons)
- Chlamydia proportion aged 15-24 screened
- Conceptions in those aged under 16 years
- Conceptions in those aged under 18 years
- Ectopic pregnancy admissions rate
- Genital herpes diagnosis rate
- Genital warts diagnosis rate
- Gonorrhoea diagnosis rate
- GP prescribed long acting reversible contraception (LARC) rate
- HIV diagnosed prevalence rate, Adults
- HIV late stage presentation (15+ years, persons)
- HIV testing coverage, men
- HIV testing coverage, women
- HIV testing coverage, men who have sex with men (MSM)
- HIV testing uptake, men
- HIV testing uptake, women
- HIV testing uptake, MSM
- Low birth weight of term babies
- Low birth weight of all babies
- New sexually transmitted infections (STIs) including chlamydia
- Pelvic inflammatory disease admissions rate
- Sexual offences
- Syphilis diagnosis rate
- Teenage mothers
- Total abortions rate
- Under 18 conceptions
- Under 18 abortion rate
- Under 18 birth rate
- Under 18 conceptions leading to abortion
- Under 25s repeat abortions

Please note that further relevant indicators are available in the separate Sexual and Reproductive Health (**SRH**) Profiles tool. The SRH Profiles tool provides trend data and enables various means of grouping, benchmarking and comparing local authorities according to area type.

What SPOT can be used for

Sexual and reproductive health have been considered to be cost effective for many years (1-3). However understanding the complex relationship between spending and outcomes is challenging. Analysis of spending and outcome in the UK did not identify strong evidence of a correlation with outcomes and spending for sexual and reproductive health (5, 6). This is likely the result of a variety of issues including different population case mixes and challenges around metrics of need eg the level of STI diagnoses in an area are not necessarily a direct measure of the burden of disease since an increase in an efficient service can result in an increase in diagnoses (7). As such it is not possible to make simple assumptions that differences in funding will directly correlate with an improved outcome measure such as a fall in the sexually transmitted infection (STI) diagnosis rate.

Interpretation of the data will depend upon the question being asked; for instance comparison of spend and service delivery outcomes could be used to identify if your area is an outlier (this can help identify if your area is getting value for money) or the relationship between spend and outcome could be used to identify potential improvements that might be expected by additional spending in line with other areas.

Steps for using SPOT

Step 1: Accessing SPOT

SPOT is accessible from http://www.yhpho.org.uk//resource/view.aspx?RID=49488. You can download a PDF factsheet for your LA but we would advise using the interactive spreadsheet which can be used to explore sexual and reproductive health measures in more detail. The video explains how to download and navigate the spreadsheet and further training is available by contacting the SPOT team.

Step 2: Important considerations

Before starting to undertake any analysis you should consider the following.

Accuracy of your data: for some LAs the reported spend may not accurately represent true spend within the three categories (see page 4) for Sexual and Reproductive Health. For example, some LAs have categorised

all sexual and reproductive health spending in 'STI testing and treatment' and no spending in the other areas. In this example it is difficult to compare spending with other areas because it does not give a true indication of the spend in any of the categories eg it would appear that spending in 'Contraception' and 'Advice, prevention and promotion' was below average due to inaccurate reporting of allocation. **Action:** Review your spending for all three categories and consider if this is likely to be accurate

Limitations of the data: The outcomes and spend data currently available through SPOT were not designed for direct comparison. Outcomes may include activity paid for by more than one commissioner For example if examining *GP LARC prescribing rate*, spending data on 'contraception' included in SPOT would not record local spending on contraception paid for by NHS England. **Action**: Review the measures you are considering, identify what is included and excluded in this measure.

Timing of data: SPOT uses both revenue account (RA) and revenue outturn (RO) and it is important to consider which has been used on the measure you are considering, as RA may not provide an accurate account of the actual spend. The tool allows you to compare spend and outcome within a single year, however there may be delays in accessing outcome data due to a lag in data collection and analysis, a good example of this would be teenage conceptions data. Delays between changes in spending and outcomes should be expected. **Action:** Review the spending data you are considering; select the red 'spend' tab on SPOT to display the type, year and source of data, this can be compared against the outcome data (particularly collection year).

Specific population needs: Local demographics and need will have a considerable impact on the outcome measures, however SPOT does not adjust for these factors. SRH and Local Health tools provide data for several wider determinants of health. Important risk factors which can impact the outcome measure include:

- Deprivation - known to influence outcomes such as rates of teenage conceptions (8) and rates of STIs (9), local data can be obtained from the Census
- Educational attainment - associated with teenage conceptions (8), data can be obtained from the Department for Education.
- Ethnicity - a key consideration for rates of some STIs (9) and for HIV diagnosis (10), data can be obtained from the Office for National Statistics (ONS)
- Age distribution of the population - rates of STIs are highest among young people (9) data can be obtained from ONS

- Sexual orientation - relevant for interpreting rates of STIs (9) and for HIV diagnosis, with increased rates among MSM, (10) data on marriages and civil partnerships can be obtained from ONS as a proxy measure. National estimates of the LGBT population can be found here.

As a result of these and other risk factors caution is needed when interpreting the apparent relationship shown by SPOT. **Action:** Review your local needs assessments so that you can take into account the needs of your local population.

Specific commissioning in your area: You should consider the local arrangements for sexual and reproductive health commissioning and how this would impact your findings. For example if LARC in your area is largely provided through sexual and reproductive health services you will have low GP prescribing of LARC. **Action:** Consider if local commissioning could impact on the outcomes data for your area.

Consider carefully the outcome measures to review: Ensure that there is a clear rationale for considering an association with spend (as described in step 3) and the mechanism of that association. There are measures which will not be related to sexual and reproductive health spending in the same year. For example; HIV diagnosis rate, ectopic pregnancy and sexual offences, may be driven by other factors such as local epidemiology or spend/investment in other social or healthcare services. **Action**: For each outcome measure you select the most relevant spending measure.

Step 3: Choosing key measures to explore

As described above there are several measures of outcome and 3 different spending categories. You may wish to consider factors such as those shown in table 2, which describes the rationale for selection of the indicators. Detailed information about the importance of the measure, data source and caveats of the indicators can be found on the SRH profiles under the definitions tab.

It should be noted that even when there is rationale to suppose a link between spend and a particular variable, the relationship is complex and therefore a simple correlation may not be identified and where correlation is identified these may not be a reflection of a true relationship. Due to the difficulties with the data the findings may raise more questions than they answer, but can be used to identify areas where your local authority is an outlier compared to peer LAs.

Table 2. Outcome data available on SPOT for sexual and reproductive health

Measure	Spend category	Justification	Data accuracy	Potential Rationale
GP prescribed LARC rate	'Contraception'	Expert clinical opinion is that increase in LARC use could help to reduce unintended pregnancy as their effectiveness does not depend on daily adherence. A NICE review showed LARC to be a cost effective option (11, 12).	LARC is prescribed and reported in these datasets, its coverage and accuracy is considered high however data is by prescription item rather than person based.	Spending may be correlated with local prescribing, however not all funding is from the LA and not all LARC is from GPs.
Percentage of repeat abortions		Rates of repeat abortions are believed to be an indication of lack of access to good quality contraception services. Unintended pregnancies that do not lead to abortion have been found to have a poorer outcome (13.)	Abortion data quality is considered to be high, repeat abortions are self-reported.	Abortion rates are dependent on a number of factors, spending on contraception may reduce repeat abortions.
Under 18 conception rate		Reducing teenage pregnancies is a priority because of multiple worse outcomes for both young parents and their children. Teenage pregnancies have high cost implications and place pressure of local authority social care, housing and education services (14).	Teenage conception data quality is good for those who seek healthcare. Data are released 14 months after the end of the year in which the conceptions occurred.	Previous analysis identified areas with the greatest decline in under 18 conceptions in areas with higher strategy related funding (15).
New STIs including chlamydia	'Advice, prevention and promotion'	Reducing rates of STIs locally is important both to reduce the impact and consequences at an individual level and to decrease onward transmission of infection. There is considerable inequality in the distribution of STIs and notable regional variation (9) NICE have produced guidance for services on preventing STIs (16).	Diagnosis data quality is considered to be good.	Improved spending for sexual and reproductive health may increase testing therefore a higher rate of diagnoses may indicate a higher level of service.
Proportion of 15-24 screened for chlamydia	'STI testing and treatment'	Improving the proportion screened for chlamydia in this age group is considered an effective and cost effective public health intervention allowing early detection and treatment and reducing the individual's chance of developing complications and of transmitting the infection to others (17-19).	Data quality issues are reported for a small number of local authorities.	Spending may increase screening capacity and therefore be directly correlated with the proportion screened. Consider reviewing this in combination with chlamydia detection rate, because services should aim to test the population most at risk.
Uptake of HIV testing in MSM in GUM		Universal testing in GUM is recommended. Maintaining or improving high test uptake is important to increase diagnoses of both recently acquired and long standing infection. Diagnosing HIV allows linkage to treatment, and prevention of further transmission (20).	Sexual orientation may not be disclosed or recorded and uptake may be underestimated as patients who decline a test may do so as they know they are positive, but do not disclose this, and remain within the denominator for this measure.	HIV testing in GUM clinics for MSM should be offered routinely. Increasing STI spending may increase HIV testing uptake.
Percentage of HIV diagnosed late		Late diagnosis of HIV is associated with increased morbidity, mortality and care costs. (21) Decreasing the proportion of late HIV diagnosis is an indicator in the Public Health Outcomes Framework (22).	HIV data is considered to be high quality; however both numerators and denominators are small in some areas and should be interpreted carefully.	Spend may be a factor for improved HIV services and to reduce the number of late diagnoses.

Step 4: Interpreting your results

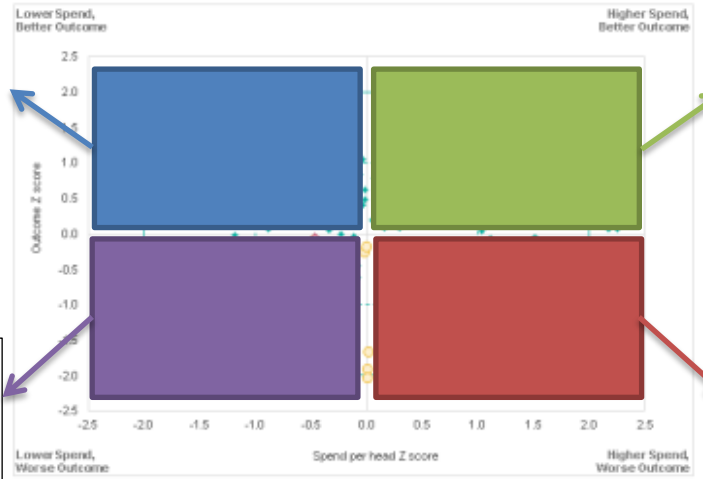
Once you are confident that a variable is related to spend the 'Detailed quadrant' can plot spend and outcome in your area compared with other LAs. Use the diagram below as a guide to interpret your results and consider the possible implications and reasons for the findings. Not all variables will be related to spend due to the reasons described above (such as issues with data quality or local factors such as strategic oversight), in these situations you may still wish to compare with you peers but you must take this into account when interpreting the results.

If you are in this quadrant it suggests that you are **spending less than average** but have an **above average outcome**.
Consider:

- If there are particular areas of need in your population, for example you may have high rates of chlamydia screening but there may be a particular target group who are not accessing screening
- The trend over time for the outcome and spend, for example if you have reduced spending recently it will take time to see an impact in the outcome

If you are in this quadrant it suggests that you are **spending less than average** and have a **below average outcome.**
Consider improving your local service by:

- Increasing investment in this area for example through training, resources, access to services and health promotion
- Target the most at need or vulnerable
- Support those affected by the below average outcome for example if your rates of teenage pregnancy are high improve local support services



If you are in this quadrant it suggests that you are **spending above average** and have an **above average outcome**.
Consider:

- That this is likely to be a worthwhile investment and may indicate that your area has a greater than average need
- If you are getting the best value for money and review your trend over time

If you are in this quadrant it suggests that you are **spending more than average** but have a **below average outcome.**
Consider improving your local service by:

- Reviewing the quality of your local service and ensure services are appropriately designed and targeted to your local need
- This may be caused by a genuine increase in your populations need, or underinvestment in previous years (which takes time to improve)
- Focus on evidence based cost effective interventions to improve the service

Step 5: Further Analysis

Once you have explored the variables you are interested in you can further understand your results by doing the following.

Using SPOT to explore further:

- **Compare with your peers:** Use the detail quadrant to find out about comparators that are preforming well, if you select the chart and scroll over comparator LAs (which appear as yellow circles) you can find out which LA they are (this is shown in a box on the bottom left corner labelled 'Mouse-over Unit.') Consider contacting LAs that are performing well to ask about their local practice.
- **Consider significance of differences:** The boxplot tabs can be used to compare both your spending and outcomes to consider if you are a significant outlier, this compares your data nationally and to relevant comparison groups.
- **Changes from the previous year:** SPOT currently includes data for 2014 and 2015 each of which can be viewed by changing the year on the tool.
- **Consider other measures:** Other measures may give context to your findings for example you may have a high *under 18 conception rate* which may indicate high risk activity that drives high rates of *new STIs.*

Use local data and intelligence: consider your findings in light of your local population; your findings should always be interpreted with the local population need. Information on local need can be found for example in your Joint Strategic Needs Assessment, local needs assessments, local service audits or local survey data.

Use the SRH profiles tool: SPOT does not compare changes over time, so use the SRH to look at **trends in outcome** over a longer period. This also allows you to compare associations between the indicators.

Step 6: Preventing misinterpretation

This data may be used to inform public health policy making, however it has the potential to be misinterpreted, which could have a negative impact on public health. When presenting or using the data ensure that the limitations (including data accuracy, ecological fallacy and lack of control for risk factors) are clearly stated.

Step 7: Improving sexual and reproductive health outcomes

The findings from your analysis can be used to highlight areas of need and to appropriately target sexual and reproductive health improvement interventions and spending in sexual and reproductive health. The data and findings should be shared, for example it could be:

- incorporated into the local Joint Strategic Needs Assessment
- presented to the Health and Wellbeing Board
- used to inform the commissioning of local services
- used to highlight need for in depth service reviews

Abbreviations

CI	Confidence Interval
GP	General Practitioner
GUM	Genitourinary Medicine
HIV	Human Immunodeficiency Virus
HPA	Health Protection Agency
HPT	Health Protection Team
ICT	Incident Control Team
LA	Local Authority
LARC	Long-acting reversible contraceptives
MSM	Men who have sex with Men
NICE	National Institute for Health and Care Excellence
ONS	Office
PDF	Portable Document Format
PHE	Public Health England
RA	Revenue Account (planned spend)
RO	Revenue Outturn (actual spend return data)
SHRH	Sexual and Reproductive Health Profiles available from URL: http://fingertips.phe.org.uk/
SPOT	Spend and Outcomes Tool
STI	Sexually Transmitted Infection
UK	United Kingdom
US	United States
WHO	World Health Organization

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