ITEM No …9……..

REPORT TO: **PERFORMANCE & AUDIT COMMITTEE – 27 SEPTEMBER 2023**

REPORT ON: **REVIEW OF EMERGENCY ADMISSION RATES**

REPORT BY: **CHIEF FINANCE OFFICER**

REPORT NO: **PAC28-2023**

1.0 PURPOSE OF REPORT

The purpose of this report is to provide an update regarding focused analytical work to interrogate and enhance understanding of National Indicator 14 (rate of readmissions to hospital within 28 days of discharge per 1,000 admissions) and associated performance data.

2.0 RECOMMENDATIONS

It is recommended that the Performance & Audit Committee (PAC):

2.1 Notes the data presented in this report

2.3 Discusses the steps taken to review performance

2.3 Agree on next steps

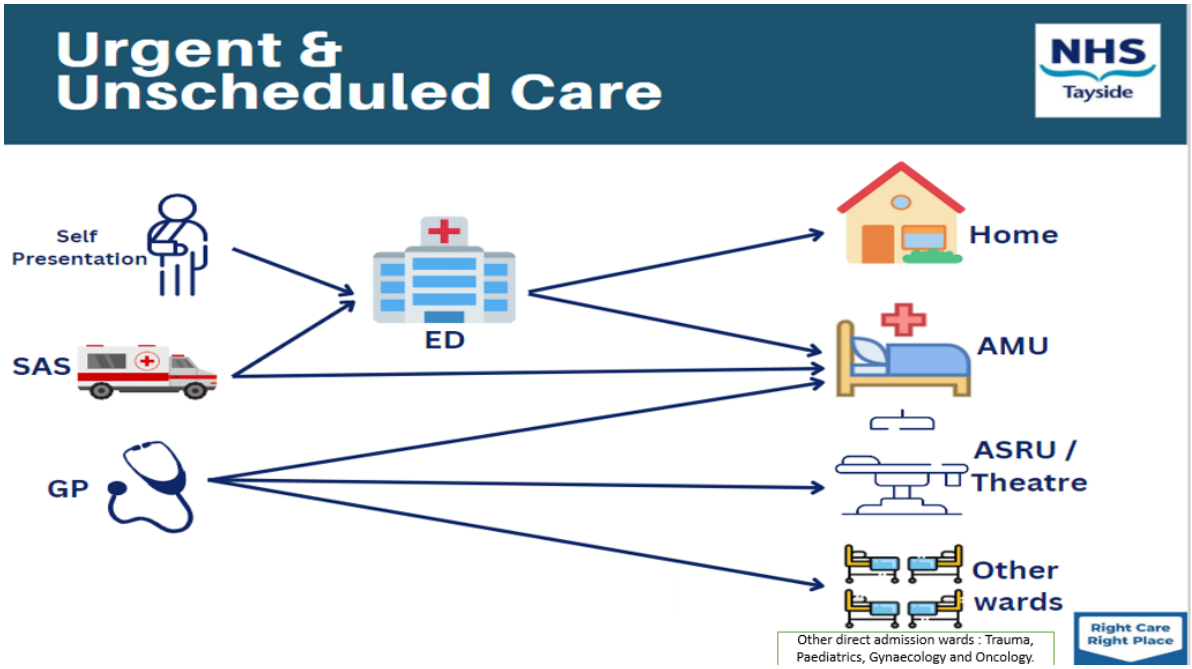
3.0 FINANCIAL IMPLICATIONS

None.

4.0 BACKGROUND INFORMATION

4.1 Unscheduled hospital care is one of the biggest demands on Partnership resources. Whilst significant improvements have been made in some aspects of unscheduled care, performance in relation to repeat emergency admissions remains an area where further understanding on indicators and performance is required to support future improvement activity.

4.2 Ninewells Hospital is the acute hospital which covers the Dundee Health and Social Care Partnership's geographical boundary. Modern patient pathways are key to the provision of health care in the right place and at the right time and in keeping with this, urgent and unscheduled care is no longer solely routed through the Emergency Department (ED). There are several 'front doors' for patients accessing Ninewells Hospital for urgent and unscheduled care. In addition to the traditional conveyancing to hospital via ambulance and self-presentation to ED, many hospital admissions are referred by General Practice directly to Acute Surgical Receiving Unit (ASRU) / Theatre and other direct admission wards (including trauma, paediatrics, gynaecology and oncology).



4.3 The source of the data used to calculate National Indicator 14 (rate of readmissions to hospital within 28 days of discharge per 1,000 admissions) is SMR 01 Acute Inpatient and Day Case. The indicator is calculated by dividing the number of readmissions within 28 days by the number of elective and emergency admissions and multiplying by 1,000. The readmission may or may not be related to the previous reason for admission. This indicator is therefore a measure of multiple admissions.

4.4 The Performance and Audit Committee has received a series of in-depth analytical reports for unscheduled care, including readmissions (Article VIII of the minute of the Dundee PAC on 29 May 2018, Article IV of the minute of the Dundee PAC on 25 March 2019 and Article XIV of the minute of the Dundee PAC on 22 September 2020 refer). At the end of 2021, further analytical work was being planned (Article VII of the minute of the Dundee PAC on 24 November 2021 refers), however this was suspended as local data for readmissions was not available from Q1 2021/22 as NHS Tayside Business Unit (NHST BSU) were undertaking investigation and improvement of coding and recording to ensure greater parity when benchmarking performance across Partnerships (Article XI of the minute of the Dundee PAC on 20 July 2022 refers).

4.5 Looking at 2019/20 data Public Health Scotland Local Improvement Support Team (PHS LIST) devised a readmission ratio methodology. The readmission ratio is comprised of the number of readmissions observed over the expected readmissions. The rate of expected readmissions is calculated by standardising the age, sex, type of admission, and specialty specific rates of the Scotland population and then comparing that to the structure of the subject population, (in this case Dundee's). Essentially, a ratio of 1 would mean parity with Scotland; any ratio below 1 would indicate fewer readmissions than expected and anything higher would show performance worse than what would be expected for the population. Data showed that the number of readmissions in Dundee is comparable to that of Scotland as a whole over the reporting period, indicating there have been no significant increases/decreases in performance over the 2019-20 financial year. NHS Tayside as a whole shows a marginal increasing trend in ratio over the past 6 months

4.6 Changes to coding in NHS Tayside to ensure greater parity when benchmarking performance across Partnerships took place 2021-22. It was initially thought that because the denominator for this indicator included day cases but NOT outpatients and because NHS Tayside recorded higher levels of follow-up contact with patients following a hospital admission as outpatients that the denominator was lower than it should be, resulting in a higher rate. When this was tested by recalculating the rate for all Partnerships, excluding inpatient day cases from the numerator and denominator, Dundee's rate was still higher than Scotland, however, the gap between

Dundee and Scotland narrowed. Following completion of the work by NHST BSU reporting of readmissions data has recommenced as at Q3 2022/23 (please see report PAC17-2023).

4.7 Since February 2023 a short-life working group has been meeting to consider readmissions data. This group includes NHST BSU, NHST Public Health Directorate, PHS LIST and both data and intelligence and operational staff from the Dundee Health and Social Care Partnership. Initially the work of the group focused on developing a robust understanding of local readmissions data and ensuring that local calculation of the readmissions indicator is consistent with the technical definition of the national readmissions indicator. The group now has as high a level of confidence as is proportionate, given limited analytical resources, in the local data and local calculation methodology. This has provided the foundation for moving forward with further work in two areas: data definitions and quality and, analysis to inform improvement.

5.0 SUMMARY OF DATA

5.1 Dundee has a longitudinal high rate of readmissions within 28 days. Using 2022 calendar year data, which is the most current national data available, Dundee is sitting 2nd poorest in Scotland. Perth and Kinross is 3rd poorest and Angus is 6th poorest (appendix 1 - chart 1 and chart 2).

5.2 When comparing Local Community Planning Partnerships (LCPPs) with the rate in 2015/16, there is variation. The LCPPs with the biggest increases compared with 15/16 are Strathmartine (16.4% increase) and West End (15.2% increase). Lochee, North East and Maryfield rates decreased when comparing Q4 22/23 to 15/16.

5.3 When comparing LCPPs rates with the Dundee rate, Coldside (167) and West End (164) had particularly higher rates than Dundee (139).

5.4 The numerator (number of readmissions within 28 days) for 22/23 (2,873 readmissions), is similar to the number reported for 2015/16 (2,804) and is less than the number reported for 2016/17 (2,975) and 2017/18 (3,050). The number reported for 2019/20 and 2020/21 is less than reported for 22/23 and this is as expected due to the emergency Covid-19 response. (appendix 1 - chart 3)

5.5 The denominator (number of elective and emergency admissions for 22/23 (20,563) is less than in 2015/16, 2016/17, 2017/18, 2018/19, 2019/20. It is only slightly higher than in 2021/22 (19,428) (appendix 1 - chart 4). Charts 3 and 4 in appendix 1 show that the denominator has decreased at a higher rate than the numerator, causing the increase in 28-day readmissions as a rate of all elective and emergency admissions.

5.6 In NHS Tayside, endoscopy is coded as out-patient whereas in many other Health Boards it is coded as a day-case (and therefore counted in the denominator). This contributes to the lower denominator and higher rate in Tayside.

5.7 The number of readmissions 18+ as a rate per 100,000 18+ population shows that Dundee had the 10th highest rate in Scotland, Perth and Kinross had the 12th highest and Angus had the 8th lowest. This is a notable difference in comparison to the number of readmissions as a rate of all elective and emergency admissions and may be a more suitable indicator for benchmarking purposes.

5.8 45% of readmissions during 22/23 were of people who live in SIMD 1 (most deprived postcodes) and 64% were of people who live in SIMD1 or SIMD 2 (top 2 most deprived postcodes). Again, the analysis showed that these were largely multiple admissions over 28 days rather than readmissions relating to the same reason as the initial admission. When analysing the diagnosis codes, some of the most commonly used diagnosis codes for people who live in SIMD1 related to substance use and COPD.

5.9 For 18+ age group the top 5 readmission diagnoses account for 25% of all readmissions and the diagnosis codes are:

1. Other injury, poisoning and certain other consequences of external causes

2. Other diseases of the circulatory system

3. COPD

4. Other diseases of the digestive system

5. Abdominal and pelvic pain

5.10 For 65+ age group the top 5 readmission diagnoses account for 26% of all readmissions and the diagnosis codes are:

1. Other injury, poisoning and certain other consequences of external causes

2. Other diseases of the circulatory system

3. COPD

4.Other symptoms, signs and abnormal clinical and laboratory findings

5. Pneumonia

5.11 Approximately 50% of readmissions from SIMD1,2,3 and 4 are coded as the same specialty as the initial admissions. This is 60% in SIMD5 (least deprived). This again demonstrates the high rates of multi-morbidities in the most deprived areas, where people are experiencing greatest health inequalities, experience long term conditions at a younger age and more people require acute hospital care regarding multiple conditions more frequently than in more affluent area.

5.12 An analysis of readmission rates within 28 days for 0 day and 1-3 day lengths of stay showed that Dundee's rate was 8th highest for 0 length of stay and highest for 1-3 day length out of all Partnerships in Scotland (appendix 1 - charts 5 and 6).

5.13 71% of admissions prior to readmission required 'no procedure'.

5.14 Proportionally high number of readmissions relate to initial admission diagnosis neoplasm.

5.15 There is variation in rates of readmissions per GP Practice. Highest rate of readmission per head of practice list is Lochee (35 readmissions per 1000 patients) followed by Park Ave and Maryfield (26 readmissions per 1,000 patients).

5.16 Assuming that the 2022-23 denominator did not change, in order to match the Scotland rate, which is also approximately the median point, Dundee would have to reduce the number of readmissions over the year from 2,875 to 2,100 (a reduction of 775 readmissions)

6.0 NEXT STEPS

6.1 Work continues to progress across Dundee in line with the Tayside Urgent and Unscheduled Care Programme, whereby the level of readmissions will be considered as a balancing measure for improvement to ensure we are achieving better outcomes for patients by preventing unnecessary hospital admission where it is not clinically indicated. Dundee Health and Social Care Partnership commit to optimising their urgent care services to support individuals to remain at home safely with the appropriate care and treatment to prevent hospital admission and support timely discharges using the "Right Care, Right Place, Right Time" approach.

6.2 As well as providing feedback to Public Health Scotland regarding the technical definition of the national indicator, work will progress locally to develop a suite of balancing measures to give further insight into the bigger picture (examples of these could include: rate of readmission per 1,000 population, % of readmissions where initial admission had length of stay of 0 days, rate of readmissions per 1,000 admissions where endoscopy is included in the denominator). This will support an approach, working alongside operational colleagues, that contextualises

readmissions activity as part of the pathway of unscheduled care and articulates the impact of wider improvement activity on a broader suite of indicators that provide a more holistic overview of unscheduled care performance and quality.

6.3 A number of areas have been identified where further data analysis is being considered:

- Further analysis of data by admission routes;
- Further analysis of instances where there have been a significant number of multiple readmissions;
- Linking of people who were readmitted within 28 days with social care systems; and.
- Identification of the % of people who were readmitted to the same specialty who initially discharged themself against medical advice.

7.0 CONCLUSION

7.1 Analysis of readmissions to date has identified a number of reasons for the high number of readmissions within 28 days as a rate of admissions. The largest contributor to the high rate is the low number of admissions (elective which includes day cases but not out-patients and emergency combined) due to some high volume procedures, such as endoscopy, being coded as outpatients in NHS. This means that despite the number of readmissions not increasing the rate has increased.

7.2 The definition of this indicator requires all admissions within 28 days of the previous admission to be included, regardless of whether or not the reason for admission is the same. Analysis has identified that many of the people with multiple admissions within 28 days live in the most deprived postcodes and are admitted to a different specialty than their previous admissions. This supports existing research findings regarding health inequalities and co-morbidities in the more deprived areas of the City.

7.3 There are a number of further avenues for investigation which the Working group are considering and prioritising. Of particular interest is the high % of admissions and readmissions which required no procedure and the high % of readmissions with a short length of stay. Many of the proposed next steps would require operational, and in some instances clinician input, to be able to be prioritised which is challenging given current levels of demands and resources pressures across relevant services.

8.0 RISK ASSESSMENT

Risk 1 Description	The risk of not reducing the rate of hospital admissions due to a fall could affect; outcomes for individuals and their carers and spend associated with unscheduled hospital admissions if the Partnership's performance does not improve.
Risk Category	Financial, Governance, Political
Inherent Risk Level	Likelihood 3 x Impact 5 = Risk Scoring 15
Mitigating Actions (including timescales and resources)	- The in depth analysis included in this paper and appendix will be used to inform senior managers. - The Tayside Falls Prevention and Management Framework will provide an infrastructure to monitor progress in the community, hospital and care homes towards preventing the incidence of falls and reducing the negative effect of falling on people who fall and their carers.

	- The priority areas for improvement (section 8.0) have been developed to reduce the rate of hospital admissions as a result of a fall.
Residual Risk Level	Likelihood 3 x Impact 3 = Risk Scoring 9
Planned Risk Level	Likelihood 2 x Impact 3 = Risk Scoring 6
Approval recommendation	The risk level should be accepted with the expectation that the mitigating actions are taken forward.

9.0 POLICY IMPLICATIONS

This report has been subject to the Pre-IIA Screening Tool and does not make any recommendations for change to strategy, policy, procedures, services or funding and so has not been subject to an Integrated Impact Assessment. An appropriate senior manager has reviewed and agreed with this assessment.

10.0 CONSULTATIONS

The Chief Officer, Heads of Service - Health and Community Care and the Clerk were consulted in the preparation of this report.

11.0 BACKGROUND PAPERS

None.

Dave Berry
Chief Finance Officer

DATE: 28 August 2023

Lynsey Webster
Senior Officer, Strategy and Performance

APPENDIX 1
Analysis of Rate of 28 Day Readmissions in Dundee

Chart 1 - rate of hospital readmission within 28 days by Partnership

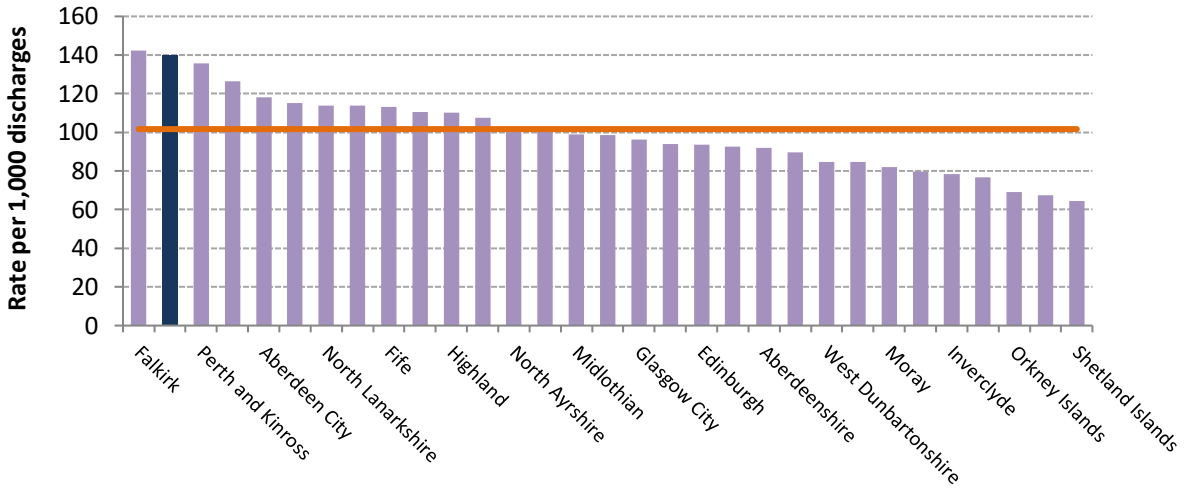


Chart 2 - rate of hospital readmission within 28 days by Partnership, over time

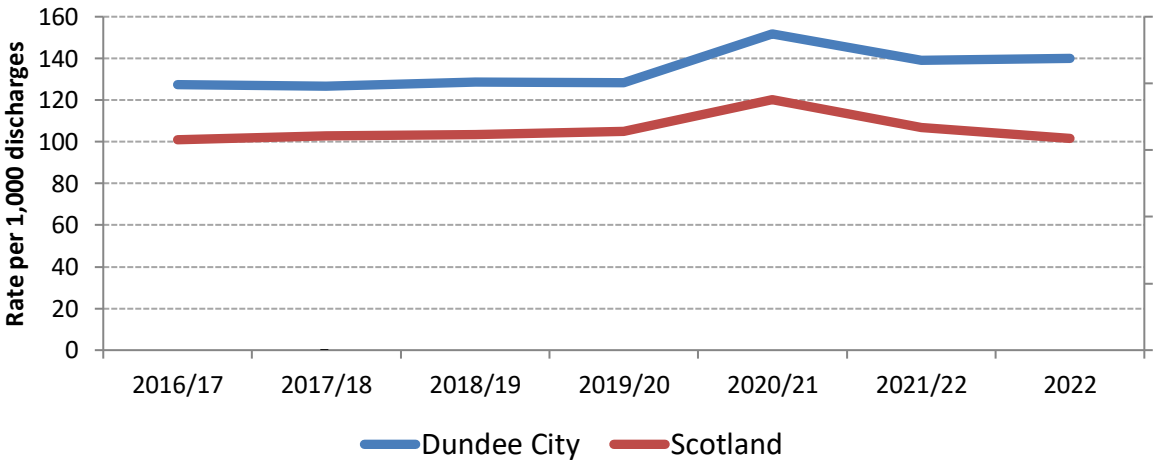


Table 1 - Performance in Dundee's LCPPs - % change in Q4 2022-23 against baseline year 2015/16 (Source: NHST BSU Trakcare)

National Indicator	Dundee	Lochee	East End	Coldside	North East	Strathmartine	Maryfield	West End	The Ferry
28 Day Readmissions rate per 1,000 Admissions	+5.3%	-5.4%	+10.1%	+4.8%	-0.4%	+16.4%	-9.2%	+15.2%	+12.0%

Table 2 - Performance in Dundee's LCPPs - LCPP Performance in Q4 2022-23 compared to Dundee (Source: NHST BSU Trakcare)

National Indicator	Dundee	Lochee	East End	Coldside	North East	Strath martine	Mary field	West End	The Ferry
28 Day Readmissions rate per 1,000 Admissions	139	139	139	167	117	140	122	164	124

Chart 3 – Number of readmissions (numerator) within 28 days by year (Source: NHST BSU Trakcare)

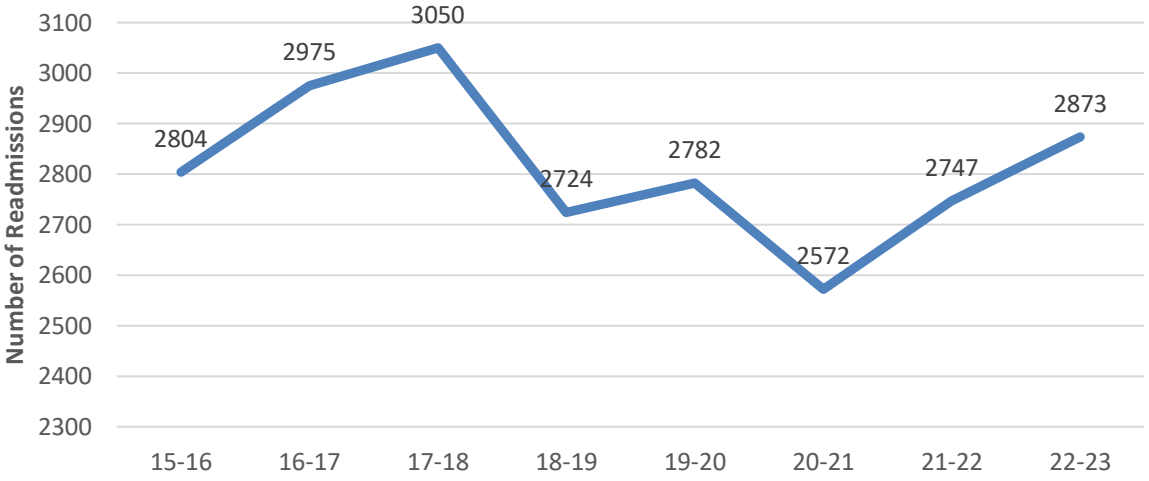


Chart 4 - Number of Elective and Emergency Admissions (denominator) by year

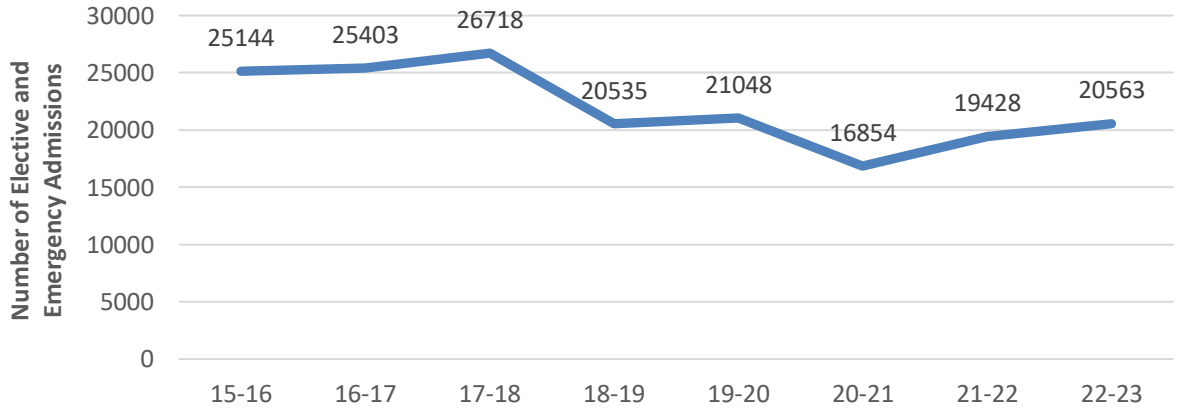


Chart 5 - 28 day readmissions with a LOS =0 (from preceding discharge) as a rate of all admissions (National Definition)

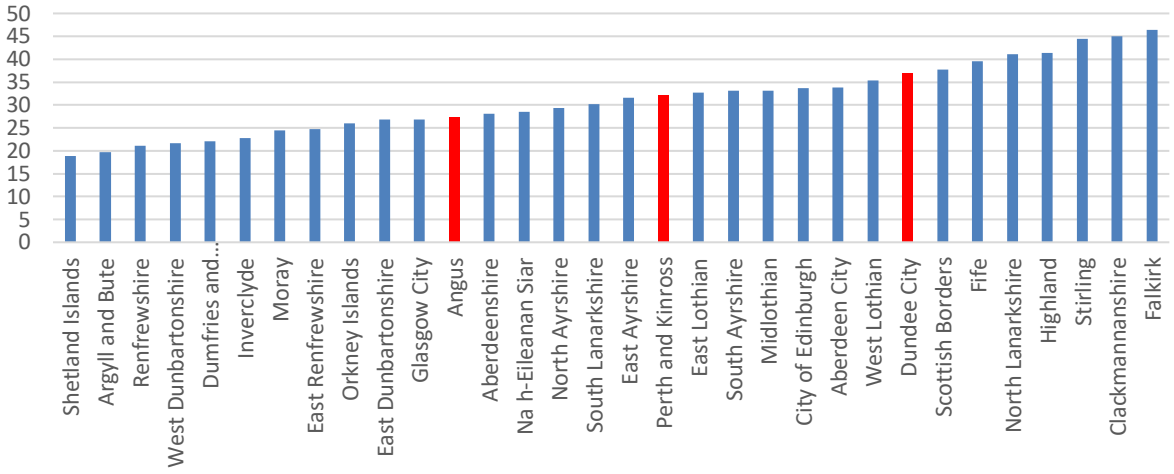


Chart 6 - 28 day readmissions with a LOS = 1-3 (from preceding discharge) as a rate of all admissions (National Definition)