Data Quality and Completeness for the Annual Acute Hospital Activity and NHS Beds Publication

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\textbf{Introduction}

The annual acute hospital activity and NHS Beds publication provides data on outpatient activity, inpatient and day case activity and beds for NHSScotland. This data release includes a mixture of 5 and 10-year trend annual data up to 31\textsuperscript{st} March 2019. The aim of this report is to summarise the completeness of the data used in the publication and provide details of known issues with national data affecting this release.

NHS Boards update their current and historical data every month and submit this information to ISD. Therefore, data included in all publication tables are provisional and subject to change from one publication to another.

The Scottish Government target for Scottish Morbidity Record (SMR) submission to ISD is 6 weeks following discharge, transfer, death or clinic attendance. For example, all SMR records with a March 2017 date of discharge would be expected to be submitted to ISD by 12th May 2017. Completeness is calculated by comparing the number of records submitted to ISD against the total number of records that the Board estimate we should receive. NHS data providers will know how complete their SMR submissions are and the extent of any backlog. ISD calculates backlog as data which is received after 6 weeks.

Data completeness varies across NHS Boards. Full details of SMR data completeness and timeliness can be found on the SMR Completeness and Timeliness web pages respectively. It should be noted that the data for this publication were extracted in June and July 2019 and therefore the contents of this document reflect completeness and other issues at that time: smr-completeness-june_july-2019

ISD are working with NHS Boards to resolve ongoing data submission issues. The majority of these issues have resulted from implementation of the new PMS TrakCare system and other existing system issues.

\textbf{Data Sources}

The data used in this publication are sourced from hospital administrative systems across Scotland and extracted from the following three datasets held by ISD.

\textbf{SMR01}

The SMR01 dataset comprises episode-based patient records relating to all inpatients and day cases discharged from non-obstetric and non-psychiatric specialties. Data are updated on a monthly basis and includes clinical and non-clinical data. The specialty of geriatric long stay is excluded from the figures published here.

\textbf{SMR00}

The SMR00 dataset contains patient-based information on appointments at outpatient clinics in all specialties (except A&E and Genito-Urinary Medicine) in NHS Scotland. Data are updated on a monthly basis and includes first and total outpatient activity and attendance status, for example Did Not Attends (DNAs).
ISD(S)1
ISD(S)1 is a set of aggregated summary statistics on activity in hospitals in NHSScotland and is derived from monthly and quarterly returns from the NHS Boards. ISD(S)1 is the only source of bed occupancy and bed availability data and contains summarised data by NHS Board of Treatment, hospital and specialty. ISD(S)1 is also used for return outpatient activity since completeness for return outpatients in SMR00 is poor. Note that estimates are applied by ISD to missing data in the ISD(S)1 dataset used for beds and return outpatient figures. Where possible, missing or incomplete ISD(S)1 data have been estimated for affected NHS Boards by averaging the last three complete monthly submissions from the relevant NHS Board unless otherwise stated. There are two NHS Boards which have a large amount of missing beds data: NHS Grampian, from quarters ending March 2011 until June 2014, and NHS Highland, from quarters ending March 2014 until September 2015. Bed numbers for both missing periods have been estimated using straight line estimation. Please refer to the Beds Methodology section (Appendix 2) of the full report for further information on estimation.

Data Validation
Data are subjected to checks by both the NHS Board where the data were recorded and by ISD once the data are received. Examples of validations carried out include: postcode exists; consultant worked in the location or specialty at the time of admission; age and sex at admission are consistent with diagnosis. Any data errors (missing or invalid information) or queries (information which appears infeasible) are sent back to the NHS Board for further investigation. Derived items added by ISD include age, continuous inpatient stay markers and geographies such as health board of residence.

Communication with Data Supply Partners
The Secondary Care team in Data Management support data providers in the submission and quality of national data sets. The team meet regularly with providers to ensure any issues affecting the data are identified and resolved at an early stage. The team also provides an advisory service to data users, in particular to ISD analytical teams who produce official publications such as this one. ISD analysts are kept up to date with any issues regarding Scottish Morbidity Records (SMR) via the regular SMR Information Bulletin.

Data Quality Assurance within ISD
Scottish NHS Boards have a responsibility to ensure their SMR data is accurate, consistent and comparable across time and between sources. The ISD Data Quality Assurance team (DQA) audit SMR data at NHS Boards to determine if it has been properly recorded in accordance with national rules and standards. The DQA team’s assessment web page contains reports from past audits of inpatient/day case data, including findings on the accuracy of submitted SMR01 data items used in our analysis (specialty, admission type, etc).

The Quality Indicators Secondary Care team who produce this publication also carry out quality assurance checks on the data after extraction from the databases. For example, they compare high-level NHS Board figures comparing the latest financial year to the previous financial year and look at trends within the current publication in order to identify any unusual patterns. For changes or patterns in the data which cannot be explained by the known completeness estimates, the team contact Data Management and the relevant NHS Board
to highlight the issue and request an explanation. Any information provided by the NHS Board is included within this document.

**Areas for Improvement**

In December 2016 the Scottish Government published: "The Modern Outpatient: A Collaborative Approach 2017-2020", that aims to deliver care closer to the patients home, provide more person-centred care, utilise new and emerging technologies, and maximise the role of clinicians across Primary, Secondary and community based services. ISD Data Advice has identified gaps in the existing national dataset (SMR00) that does not allow the full pathway to be appropriately recorded.

In order to meet the objectives, set out in the "Modern Outpatient" agenda and to ensure our secondary care datasets meet future information needs, ISD is establishing a modernisation program of all SMR datasets, with an initial focus on outpatients, to take account of new, and future, service delivery models. This would support patient and service management at NHS Board level as well as providing more accurate information at a national level.

The SMR00 Modernisation work may have an effect on the number of SMR’s submitted. In addition, other disciplines of staff are increasingly carrying out care for patients which may impact on the number of consultant clinics run.

**General SMR Issues**

**SMR Replacement Records**

It should be noted that ISD identified an issue in June 2018 whereby some SMR replacement records being submitted by TrakCare NHS Boards resulted in the original SMR record being amended in error. This caused some data items being over written which may have impacted on some local and national analysis. Data Management have been working closely with NHS Boards and Intersystems to try and identify the reasons for this. A decision was also taken to temporarily hold any replacement records being submitted on a separate table and not be added to the national file until such times as Data Management were confident that all issues were identified and fixed.

To date Intersystems have developed two fixes and NHS Boards are at different stages of implementing. This issue is less likely to affect current data (past 2 years) being wrongly amended and there is a proposal that Data Management add any replacement records received that had a change to clinical or admission details from 2017 onwards. This would bring the national file up to date with records that have been amended by NHS Boards. Data Management would also like to propose that NHS Boards would no longer be able to submit any replacement records that are more than 2 years from date of discharge or appointment and after this time the record will be 'locked' down. Data management is currently working on moving records being held on the SMR Replacement Store onto the national file. The Data Monitoring team will incorporate the process into the monthly business as usual workload. There may be a small difference in July 2019 but August 2019 should see a more significant difference to the accuracy of the file.

**SMR Episode Record Key Issue**

NHS Greater Glasgow and Clyde have recently deployed a fix for a known episode record key issue. This involved deleting records and reinserting them with a new episode record key. This fix did not go to plan: and there are 1,970 missing SMR01 records for the period
August 2011 – June 2012. NHS Greater Glasgow and Clyde expect to submit these records in due course.

Other NHS Board Recording
**Other** NHS Board relates to locations which are domiciliary, resident outwith Scotland, patients with no fixed abode or unknown residence. Increases have been observed in this category. The main reason for this is the increases in unknown location ‘D299N’, particularly in NHS Borders, NHS Greater Glasgow & Clyde and NHS Tayside. This may be attributed to their move to the TrakCare system. It is more difficult to record variable locations in TrakCare such as schools so these are being recorded as D299N unknown.

Non-NHS Provider Data
Non-NHS Provider figures relate to patients treated in non-NHS locations such as private hospitals, hospices, nursing homes, care homes, etc. Patients who receive treatment at a Private (independent) hospital which is paid for by the NHS Board should be recorded within the SMR by the relevant NHS Board. However, if a patient is treated privately (i.e. treatment paid for by patient or private insurer) and there is no NHS involvement then this activity will not be recorded within the SMR. The data recording / completeness of Non-NHS Provider data varies from year to year, therefore please treat any data provided with caution. It should also be noted that any changes both increases and decreases in activity are based on small numbers which will impact on the percentage change.

SMR01 Data Quality

Completeness
NHSScotland SMR01 data are estimated to be 99% complete for the financial year ending March 2019. There are some outstanding records yet to be submitted and some data quality issues to be aware of.

NHS Boards which are less than 95% complete:

NHS Forth Valley
SMR01 completeness for NHS Forth Valley for the financial year ending March 2019 was 89%. The SMR01 backlog has been a result of staff vacancies and ongoing absence as well as the recent move to TrakCare. NHS Board staff are investigating ways of addressing the backlog over the coming months.

NHS Boards which are 95 to 99% complete:
There are minor completeness issues in NHS Dumfries & Galloway, NHS Fife, NHS Grampian, NHS Greater Glasgow & Clyde, NHS Highland, NHS Lanarkshire, NHS Lothian, NHS Shetland, NHS Tayside and the National Waiting Times Centre.

General Issues

Acute Assessment Unit (AAU) / Ambulatory Emergency Care (AEC) activity

Definitions

- Acute Assessment Unit (AAU)

The AAU is a dedicated facility for the acute clinical care of patients that present to hospital as clinical emergencies or who develop an acute clinical problem while in hospital. The units may also carry out some planned healthcare.
Generally, these units have both trolleyed areas and staffed beds which form part of the hospital’s bed complement. Where trolleys are used in lieu of beds, patients should be counted as inpatients.

**Acute Assessment Unit (AAU)** is the preferred term for services also known as:
- medical/surgical assessment unit
- combined assessment units
- clinical assessment units
- acute medical (assessment) units
- paediatric assessment units
- acute receiving ward/unit admission unit

These cases should be recorded under significant facility 40.

- **Ambulatory Emergency Care (AEC)**

An Ambulatory Emergency Care Unit is a multidisciplinary ‘one stop’ service. It provides Outpatient and Daycase services only.

These cases should be recorded under significant facility 39.

**National recording of AAU & AEC activity**
Currently AAU activity is only being submitted by some NHS Boards within SMR01. NHS Greater Glasgow & Clyde AAU activity stopped in 2017. NHS Highland have been submitting AEC cases via SMR01 using criteria agreed by ISD to ensure that they pass validation rules as an interim measure. NHS Greater Glasgow & Clyde has opted to record these cases differently from NHS Highland since they consider a number of these cases to be non-elective day cases which, due to recording rules, cannot be recorded that way on TrakCare. As such they took the decision to record them as Emergency Department activity to allow them to be able to follow the patient through the system.

There are ongoing discussions with NHS Boards, the Scottish Government and ISD on the most appropriate way for capturing this activity including AEC cases. AEC is under the scope of SMR00 Modernising Review, and it is hoped that national definitions and guidance on how to record this activity can be agreed by all NHS Boards.

**Transfers**
Several NHS Boards have experienced changes in internal transfer activity, due to the way in which their data submissions have been submitted. However, it should be noted that any changes both increases and decreases are based on small numbers which will impact on the percentage change. For more information, see individual NHS Boards below.

**NHS Board-specific Issues**
Many trends observed may be influenced by and attributable to the data completeness levels and small numbers. Therefore, caution should be taken when comparing annual information.

**NHS Ayrshire & Arran**
For the period January 2016 to July 2017, additional records have been incorrectly generated when patients were transferred to a discharge lounge. This involved 390 records at Ayr Hospital and 893 records at Crosshouse Hospital between January 2016 and July 2017. NHS Ayrshire & Arran has also advised that there may be some affected records.
before January 2016. The Board is looking to implement a change to ensure that no additional records are generated when patients are transferred to discharge lounges, which should take place in the near future. The affected additional records will also be corrected in due course.

Decreases were observed for internal transfer activity. NHS Ayrshire & Arran have advised that the transfers are likely to have decreased as beds have been closed, some of which were longstay and decant beds. A TrakCare system error was identified which resulted in the episode being recorded as a transfer on the SMR extract. Due to the running of a daily exception report, these are now corrected thus reducing the number of transfers.

**NHS Borders**
Decreases were observed in daycases and internal transfer activity, whilst increases were seen in emergency and elective admissions. NHS Borders have previously informed that reductions in daycases could potentially be a change from recording colonoscopies (General Medicine specialty) as daycases to outpatient activity. NHS Borders have advised that the transfer numbers are small which may cause variation/impact on the percentage change. NHS Borders also highlighted that previous transfer data issues have been rectified and that the accurate recording of transfers may play a part in this. NHS Borders have commented that that the increases in Cardiology, General Medicine and Geriatric Medicine specialties may account for the rise in emergency admissions. Elective admissions have increased in specialties were there was a reduction in daycases (General Surgery and Orthopaedics) so there may have been more complex cases dealt with in the specialties compared to the previous year, therefore there has been a change in the inpatient/daycase ratio.

**NHS Dumfries & Galloway**
Dumfries & Galloway Royal Infirmary (Y104H) moved location in December 2017, and inpatient and daycase (SMR01) episodes are now recorded under a new code Y146H. The name remains “Dumfries & Galloway Royal Infirmary”. The implications are that since December 2017 about half of the usual SMR01 records are now being recorded under Y146H as expected, although there does still remain some SMR01 records under Y104H. To ensure that no SMR01 activity is missed, and to allow trends to be presented, the two hospital codes Y146H and Y104H will be combined in our analyses for the Dumfries & Galloway Royal Infirmary. This may take a few months to level off.

NHS Dumfries & Galloway saw a rise in daycases and internal transfer activity. NHS Dumfries & Galloway have advised that the increase in transfers may be due in part to patients who reside closer to Galloway Community Hospital being transferred there from Dumfries & Galloway Royal Infirmary during times of increased pressures to free up bed space at Dumfries & Galloway Royal Infirmary. NHS Dumfries & Galloway commented that there was a dip in all elective activity during November and December 2017 during migration to the new hospital so the figures in 2017/18 would have been slightly lower as a result and have returned to more normal levels during 2018/19.

**NHS Fife**
Increases were observed in daycases whilst internal transfer activity decreased. However, the decrease in internal transfers is based on relatively small numbers which will impact on the percentage change. NHS Fife have said that the provision of new drugs, new consultants and a general increase in demand has resulted in extra daycase activity being carried out in Medical/Clinical Oncology in order to meet the Waiting Times deadlines and provide these additional treatments. The number of General Surgery daycases has increased because Oral Surgery has been moved to Oral and Maxillofacial which is grouped under Surgery. Some Gastroenterology procedures were moved from Outpatients to Day Cases at the start of 2019 in order to ensure that these episodes were coded correctly and in line with the rest of Scotland. There has been a general increase in demand across the specialties with some
areas more seriously affected than others. NHS Fife advised that transfers continue to fluctuate as they work through and discover issues within TrakCare which have resulted in episodes having to split up into discharges and admissions where previously the patients were transferred. NHS Fife continue to work with their IT team and Intersystems to find satisfactory resolutions to their ongoing TrakCare problems.

**NHS Forth Valley**
Decreases were seen in inpatient and daycase activity. NHS Forth Valley have advised that this is mainly due to a backlog in SMR01 coding and submissions at the time the data was taken for publication. There is still a backlog for March 2019 submissions. There have also been changes to how ambulatory care patients are recorded which will affect comparisons with other years. There has been a decrease in daycases; a factor in this is that NHS Forth Valley operates 23-hour surgery as common practice for daycase patients. These get translated to inpatients in national data as 23-hour surgery is not recognised by ISD.

**NHS Grampian**
Increases were observed in internal transfer activity. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change.

**NHS Highland**
Increases were observed in all inpatient and daycase activity, particularly daycases and internal transfer activity. NHS Highland have advised that in line with changing models of care and streamlining clinical processes so that patient care can be delivered on the same day as admission, NHS Highland has seen an increase in the number of urgent daycase admissions in the financial year 2018/2019, compared to the year 2017/2018. The Ambulatory Emergency Care service at Raigmore Hospital has further evolved and now includes a wider range of clinical pathways including, General Surgery, Trauma & Orthopaedics, Gynaecology and Paediatrics. Other Acute sites within NHS Highland have also introduced an AECU facility, further contributing to the increase observed in the yearly trend.

NHS Highland have said that the increase in internal transfer activity is due to data completeness issues. The increase in the number of transfers is mainly attributed to the specialty of Medical Paediatrics. NHS Highland have carried out investigations on local data and identified a substantial number of admission records (i.e. first SMR in the Continuous Inpatient Stay (CIS)), under the specialty Medical Paediatrics, which have failed the validation process due to user error. Other than the first SMR in a CIS, the Admission Type for any subsequent SMR is auto-generated by TrakCare as code 18 (Planned Transfer) which means that if the first SMR (start of the CIS) is missing from the national file, any subsequent SMR within the same CIS, is essentially recognised as the start of the CIS in national files. The errors identified will be assessed and prioritised by NHS Highland’s Data Quality Action Group.

**NHS Lanarkshire**
Increases were seen in daycases whilst internal transfer activity decreased. However, the decrease in internal transfers is based on relatively small numbers which will impact on the percentage change. NHS Lanarkshire have commented that the increase in day cases is due to General Surgery and Ophthalmology activity.

**NHS Orkney**
Increases were observed in both emergency admissions and daycases whilst elective admissions decreased. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change. NHS Orkney have advised that the scope washer was broken for a few months at the start of 2019 which would have reduced the number of elective admissions in NHS Orkney.
In terms of emergency admissions, NHS Orkney advised that there has been a steady increase in numbers attending A&E with the likelihood that this will be increasing the number of patients being admitted as an emergency case. As well as the increase in emergency admissions for Orkney patients, the number of emergency cases for patients from outwith Scotland is an area that has increased between 2017/18 and 2018/19.

NHS Orkney advised that the increase in day cases could be due to an increase in Ophthalmology and Orthopaedic day cases, as the board had had extra theatre sessions for Ophthalmology and locum consultant doing Orthopaedic theatre/clinics.

NHS Shetland
Decreases were observed in elective admissions and internal transfer activity, whilst daycases increased. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change. NHS Shetland have previously informed us that there will be variability/ fluctuation monthly, quarterly and annually, due to visiting clinics and the small patient numbers involved.

NHS Tayside
Increases were observed in daycases whilst decreases were observed in elective inpatients and internal transfers. NHS Tayside have advised that there is a national trend towards delivering more treatments as daycase activity rather than as inpatient activity resulting in the observed trends.

NHS Western Isles
Decreases were witnessed in daycases whilst increases were observed in emergency admissions. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change. NHS Western Isles have advised that the decrease in daycases is due to a very limited scopes service from August 2018 through to late March 2019. NHS Western Isles have noted that the numbers of emergency admissions have been increasing and have informed their management team of this observed trend.

National Waiting Times Centre (NWTC)
Increases were seen in inpatient and daycase activity whilst internal transfer activity declined. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change. NWTC advised that this is due to increased activity which has been agreed with referring NHS Boards, increasing the number of elective admissions and daycases. NWTC also commented that there has been a shift from elective transfers to urgent (inpatient transfers) activity which is reflected across the UK.

SMR00 Data Quality

Completeness
NHSScotland SMR00 data (relating to new attendances only) are estimated to be 99% complete for the year ending March 2019. There are some outstanding records yet to be submitted for this period and the following data quality issues to be aware of.

NHS Boards which are less than 95% complete:

NHS Borders
SMR00 completeness for NHS Borders for year ending March 2019 was 86% at June 2019. As at 11 June 2019, there was still an SMR00 backlog relating to Mental Health and
Learning Disability records due to a change in implementing a new community and mental health patient management system, EMIS. This has affected the return of both SMR00 and ISD(S)1 Outpatient records. The recovery plan for Mental Health records has yet to deliver the expected results and NHS Borders staff are looking at alternative options to speed up the work on resolving the outstanding backlog and error correction.

**NHS Tayside**
Due to ongoing TrakCare issues, NHS Tayside is estimated to be 96% complete for year ending March 2018 and 93% complete for year ending March 2019. NHS Tayside outpatient activity has been declining due to the SMR00 backlog/completeness issues mentioned above and due to TrakCare system recording and reporting issues and errors. In addition, NHS Tayside has advised that the national SMR data which they submit monthly does not align with those that NHS Tayside hold locally. NHS Tayside have said that whilst there is variation, they note that the overall direction of travel in respect of the changes compared to previous years aligns with their local data. NHS Tayside understands this variation is due to a variety of factors, including known system errors, system configuration, data completeness and user errors. NHS Tayside intends to pull together a system wide data quality plan to support them to identify the key causes and impact each is having on the acute activity reported, as well as identification and implementation of resolutions to these causes.

**NHS Boards which are 95 to 99% complete:**
There are minor completeness issues in NHS Dumfries & Galloway, NHS Grampian, and NHS Greater Glasgow & Clyde.

**General Issues**

**Recording of SMR00 procedures**
In the past couple of years, it has been noted that the recording of procedures is not consistent across the NHS Boards. NHS Borders, NHS Dumfries & Galloway, NHS Grampian, NHS Lanarkshire, NHS Lothian and the NHS Island Boards record procedures on less than 10% of records submitted. Other NHS Boards record procedures on from 10% to under 25% of records. This issue will be looked at as part of the SMR00 Modernising Review.

**Recording of Return Attendances**
The submission of all return attendances is mandatory regardless of whether or not a procedure is performed. However, there is variation in the NHS Boards submissions of return outpatients in SMR00. For this reason, ISD(S)1 has been used to extract return outpatient attendances.

**NHS Board-specific Issues**
Many trends observed may be influenced by and attributable to the data completeness levels and small numbers. Therefore, caution should be taken when comparing annual information.

**NHS Ayrshire & Arran**
Note the recording of endoscopy procedures moved from day cases to outpatients from November 2014 onwards.

**NHS Borders**
NHS Borders outpatient activity has declined in 2018/19 attributable to the backlog mentioned above. NHS Borders said that they have observed a reduction in new appointments since they implemented the new EMIS system and believe this is due to improved processes for data capture. NHS Borders also advised that they have also seen a reduction in in relation to work they have been doing to improve the Orthopaedic Pathway.
There has also been a reduction in new outpatient activity for the Eyes, Nose & Throat (ENT) specialty due to unavailability of consultants. However, return activity was not impacted due to NHS Borders running extra clinic sessions.

**NHS Dumfries & Galloway**

Dumfries & Galloway Royal Infirmary (Y104H) moved location in December 2017, and activity is now recorded under a new code Y146H. The name remains “Dumfries & Galloway Royal Infirmary”. The old site still exists and is now a treatment centre named “Mountainhall Treatment Centre”. This means outpatient (SMR00) historic episodes are recorded under the old code Y104H with the new code Y146H coming into effect in December 2017. To ensure that no SMR00 activity is missed, and to allow trends to be presented, the two hospital codes Y146H and Y104H will be combined in our analyses for Dumfries & Galloway Royal Infirmary. This may take a few months to level off. New activity for Mountainhall Treatment Centre (Y177C) will be reported separately.

NHS Dumfries & Galloway witnessed a rise in return and total outpatient activity. NHS Dumfries & Galloway have advised that some of the increase in outpatient activity will be down to the move to their new hospital in November and December 2017. During the build up to the move and in the days after it was completed, there was a freeze on outpatient clinics which meant there were a number of days where there will have been no outpatient clinics. Therefore, activity will have been artificially lower during that period and there will be a return to more normal levels in the same period in 2018. This had a big impact on the paediatric specialty with a very definitive dip in December 2017. In terms of Mental Health, NHS Dumfries & Galloway did see improved reporting of activity in some associated teams as they adopted the Patient Administration System (PAS) so this meant NHS Dumfries & Galloway could capture and report more activity. Other increases are likely to be down to an increase in activity due to running increased number of clinics by bringing in external help to assist in dealing with our outpatients at weekends etc.

**NHS Fife**

Increases were observed in new outpatient activity. There has been a general increase in referrals to NHS Fife and they have held extra Outpatient Clinics in order to meet the Waiting Times deadlines. They are still re-aligning some services since their move to TrakCare and previously unrecorded activity is now recorded especially with the recording changes that are coming with the remodelling of SMR00. The large increase in Oral Maxillofacial is a direct result of NHS Fife re-organising the service from Oral Surgery, which was incorrect, to Oral Maxillofacial Surgery. Therefore, there will be a corresponding drop in Oral Surgery activity.

Overall DNA rates have been declining since January 2018. NHS Fife informed that they had been very proactive in ensuring that where possible all patients sign up for Text Reminders of their appointments and it would appear that this is having the desired effect of reminding the patients to attend or cancel their appointments.

**NHS Forth Valley**

Increases were seen in outpatient activity. NHS Forth Valley previously advised that the increases are due to them being in a midst of a recovery plan as per the national waiting times improvement plan and they have been using weekend sessions locally and private sector (which are included in the numbers presented here).

**NHS Grampian**

Overall DNA rates have been declining since January 2018. NHS Grampian have advised that the decrease is due to them using Patient Focused Booking (PFB) again and having the patient phone in to arrange a suitable appointment. They have also introduced text
reminders for appointments in some of their outpatient services, which they say has had a positive impact.

**NHS Greater Glasgow and Clyde**

Overall DNA rates have been declining since April 2018. NHS Greater Glasgow & Clyde have informed that the decrease is due to the fact that they are using Patient Focused Booking (PFB) again and using attend anywhere and advice letters to patients rather than appointments.

**NHS Lanarkshire**

Increases were observed in all outpatient appointments whilst decreases were observed in Did Not Attends (DNA’s). NHS Lanarkshire has advised that the increase in new outpatient appointments is due to an increase in the Dermatology and Ear, Nose and Throat specialties. Additionally, there has been increased capacity in the sub specialties associated with General Surgery including Breast and Colorectal Surgery.

NHS Lanarkshire have advised that the decrease in DNAs is as a result of the implementation of the Modernising Outpatients Programme introducing a range of measures including text reminders.

**NHS Lothian**

NHS Lothian’s Did Not Attend (DNA) activity has declined dramatically as there is an issue with extraction of the data. NHS Lothian have provided ISD with more accurate figures for 2015-18 and they have indicated that the majority of this is related to process issues whereby staff have been entering data incorrectly and are currently in the process of trying to resolve this. NHS Lothian have advised that a software patch in May 2018 has resulted in a substantial reduction in the number of gastroenterology procedures recorded on SMR00 from June 2018 as well as a significant reduction in DNAs from May 2018. A fix has been requested from Intersystems. Data Management investigated whether this issue has affected other NHS Boards but the indication is that there are no such dramatic drops in DNA activity elsewhere. For this publication, NHS Lothian have provided aggregated Board level 2018/19 DNA figures from their local system in order to provide a more accurate reflection of both the NHS Lothian and NHSScotland DNA rate. If further, more detailed Lothian DNA information from 2018 onwards is required then please contact NHS Lothian directly.

**NHS Orkney**

Increases were observed in new outpatient appointments. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change. NHS Orkney have advised that there is a Consultant Cardiologist coming to Orkney to cover the wards, who has carried out Cardiology clinics increasing the activity within this service. NHS Orkney have also had an increase in clinicians visiting to provide extra Ophthalmology Clinics.

**NHS Tayside**

NHS Tayside outpatient activity has been declining attributable to the backlog mentioned above. In addition, following the change from the TOPAS to TrakCare system there have been issues both in terms of recording and reporting issues during this transition. For example, NHS Tayside has reduced recording and reporting within some areas and have data quality issues in terms of arriving patients and entering outcomes onto the new system. NHS Tayside has informed that Mental Health is a problem area and they are trying to meet with these services to determine a solution for missing attendance recording and put improvement plans in place via Data Quality Project Support Officers providing guidance and training. There are also differences to the way clinics have been created with clinics previously recorded under consultants now being reported under nurse-led activity. This
publication only includes consultant led activity. Additionally, NHS Tayside advised that a significant number of outpatient records cannot be included in their submission to ISD as the attendance has not been confirmed. NHS Tayside’s Medical Records teams are working on this with the services and continued efforts are being made with the services to reduce recording issues. It is hoped that the issues linked to TrakCare will be resolved when NHS Tayside upgrades to the 2018 version of TrakCare. Work is ongoing with Intersystems to resolve this.

Overall DNA rates have been declining since April 2018. NHS Tayside commented that they have introduced a text reminder service in an effort to reduce the number of DNAs.

**National Waiting Times Centre (NWTC)**

New outpatient activity increased. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change. NWTC has advised that they have seen a rise in their Ophthalmology Outpatients. This has been due to the planned service expansion and increased referral levels. NWTC DNA rate has been reducing year on year. NWTC have advised that this reduction is likely due to the introduction of their Netcall system which automatically generates text reminders to patients prior to appointments.

**ISD(S)1 Data Quality**

ISD(S)1 Inpatients data source is used for the beds figures and ISD(S)1 Outpatients data source is used for the return outpatient figures only.

**General Issues**

**ISD(S)1 Return Outpatient and Beds NHS Board coding**

Records have been identified with potentially duplicate information coming from more than one NHS Board for the same location. The numbers concerned are very low and the impact is not significant. Additionally, there are issues with the allocation of NHS hospitals to NHS Boards and private hospital activity to the ‘non-NHS Provider code’. Data Management have investigated and found that in many of these cases, this can be attributed to visiting consultant activity and NHS Boards sending their patients to private locations.

**NHS Board-specific Issues**

Many trends observed may be influenced by and attributable to the data completeness levels and small numbers. Therefore, caution should be taken when comparing annual information.

**NHS Ayrshire & Arran**

NHS Ayrshire & Arran have seen a reduction in the number of average available staffed beds. During the reference period NHS Ayrshire and Arran has closed a number of beds in Ailsa, University Hospital Ayr, University Hospital Crosshouse, and East Community Ayrshire, which accounts for the reduction of available staff bed days. Health and Social Care Partnerships and Acute Services have put in place a number of measures to sustain keeping these beds closed.

**NHS Dumfries & Galloway**

The number of average available staffed beds decreased whilst the percentage occupancy increased. NHS Dumfries & Galloway have advised that the move to the new hospital has impacted on these figures. They have moved to a slightly different bed model. Although the net number of beds is the same, how the beds are allocated is slightly different. There is a reduction in acute medical and surgical beds but more beds are available in their combined assessment unit, high dependency and intensive care units. Of greater importance is likely
to be an increase in activity overall with the demands on Dumfries & Galloway Royal Infirmary being more than the winter of 2017/18 with them nearing full capacity on more occasions in 2018/9.

NHS Dumfries & Galloway witnessed a rise in return and total outpatient activity. NHS Dumfries & Galloway have advised that some of the increase in outpatient activity will be down to the move to their new hospital in November and December 2017. During the build up to the move and in the days after it was completed, there was a freeze on outpatient clinics which meant there were a number of days where there will have been no outpatient clinics. Therefore, activity will have been artificially lower during that period and there will be a return to more normal levels in the same period in 2018. This had a big impact on the paediatric specialty with a very definitive dip in December 2017. In terms of Mental Health, NHS Dumfries & Galloway did see improved reporting of activity in some associated teams as they adopted the Patient Administration System (PAS) so this meant NHS Dumfries & Galloway could capture and report more activity. Other increases are likely to be down to an increase in activity due to running increased number of clinics by bringing in external help to assist in dealing with our outpatients at weekends etc.

**NHS Fife**
There are minor submission issues with ISD(S)1 beds data and estimation has been applied from July-September 2018.

**NHS Forth Valley**
The beds percentage occupancy has decreased.
From 1st December, Stirling Community Hospital closed along with all its wards and the Bellfield Centre opened. The Bellfield Centre provides short-term inpatient care, assessment or rehabilitation for people who require additional support following an operation or illness. Within the Bellfield Centre there is one new NHS ward, the Wallace Suite. Most of the beds are converting to partnership controlled intermediate beds. This may impact on NHS Forth Valley’s bed figures.

**NHS Grampian**
Beds data for quarters ending March 2011 up until June 2014 have been estimated due to data submission issues following the implementation of a new Patient Management System (TrakCare). Please refer to the Beds Methodology section (Appendix 2) of the full report for further information on estimation.

**NHS Greater Glasgow & Clyde**
From June 2016 onwards, beds and outpatient’s data have been estimated for Mental Health Specialties. As at May 2018, estimates have not been applied to beds, however minor estimation still applies to ISD(S)1 outpatient figures.

**NHS Highland**
Beds data for quarter ending March 2014 to quarter ending September 2015 have been estimated due to data submission issues following the implementation of a new Patient Management System (TrakCare). Please refer to the Beds Methodology section (Appendix 2) of the full report for further information on estimation.

There are ongoing issues which directly impact on Highland’s available bed day figures. Work is ongoing to address the issues and NHS Highland are working closely with the sites involved to ensure their bed data is more robust going forward. Whilst the impact on data already reported is recognised, it is not technically possible for NHS Highland to provide revised data for previous quarters due to TrakCare PMS system limitations.
NHS Lanarkshire
Increases in the number of return outpatient appointments have been observed. NHS Lanarkshire have advised that the increase in Consulted Return attendances is predominantly due to Haemodialysis attendances being incorrectly submitted which is inflating the increase in the returns percentage. The remaining increases are due to an increase in the Child and Adolescent Psychiatry specialty at two health centres within the Board. Additional new clinics at NHS Lanarkshire has seen an increase in return activity for the Oral and Maxillofacial specialty. NHS Lanarkshire has also advised that there has been a change in the service mapping process for the plastic surgery specialty.

NHS Lothian
There are minor submission issues with ISD(S)1 outpatients’ data and estimation has been applied.

Increases were observed in return outpatient appointments. NHS Lothian have said that the increase is due to an increase in demand. A large rise has been seen in Rheumatology. NHS Lothian commented that the outpatient waiting list for Rheumatology has doubled over the past couple of years.

NHS Shetland
Reductions in the number of average available staffed beds have been observed and percentage occupancy has increased. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change.

Increases were observed in return attendances. However, it should be noted that any changes are based on relatively small numbers which will impact on the percentage change. NHS Shetland have previously informed us that there will be variability/ fluctuation monthly, quarterly and annually, due to visiting clinics and the small patient numbers involved. NHS Shetland commented that they have a substantial programme of work in Shetland to enable Shetland patients to be seen in Shetland rather than Grampian. This covers all acute specialties when suitable opportunities arise.

NHS Tayside
Bed occupancy figures from May 2016 to June 2017 are inaccurate due to a system bug in a previous version of a patient management system. NHS Tayside are unable to correct this issue as they can no longer submit any retrospective information from that historic system as they no longer have access to modify the data held within it.

Decreases in the number of average available staffed beds have been observed. NHS Tayside have advised that there has been recent work undertaken in NHS Tayside to realign some services and ward floor plans to reflect the current delivery of services.

Decreases in return outpatient activity was observed. NHS Tayside have commented that there was a change imposed in the way clinics were required to be built in TrakCare which meant that clinics previously recorded under Consultants are now reported under nurse-led activity. Since the introduction of TrakCare there are a considerable number of outpatient episodes which cannot be included in either SMR00 or ISD(S)1 Card Class 4 and Card Class 9 as the attendance has not been confirmed. NHS Tayside also commented that ISD(S)1 Consultant-Led and Nurse-led activity extraction process has not fundamentally changed between TOPAS and TrakCare. Please note that this publication only includes consultant led activity.