AGENDA ITEM
3.8

POPULATION HEALTH & PARTNERSHIPS COMMITTEE

POPULATION HEALTH MANAGEMENT: UPDATE

Date of meeting	7/7/2021
FOI Status	Open/Public
If closed please indicate reason	Not Applicable - Public Report
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Approving Executive Sponsor	Executive Director of Public Health
Report purpose	ENDORSE FOR COMMITTEE APPROVAL

Engagement (internal/external) undertaken to date (including receipt/consideration at Committee/group)		
Committee/Group/Individuals	**Date**	**Outcome**

ACRONYMS	
CTMUHB	Cwm Taf Morgannwg University Health Board
PSRS	Population Segmentation and Risk Stratification
DHCW	Digital Health and Care Wales

SWIYC	Stay Well in Your Community
GP	General Practitioner
IPC	Institute of Public Care
IGRP	Information Governance Review Panel (for SAIL)
DPA	Data Process Agreement
DPIA	Data Protection Impact Assessment
SAIL	Secure Anonymised Information Linkage

1. SITUATION/BACKGROUND

1.1 This report provides an update on the population segmentation and risk stratification (PSRS) approach to Population Health Management in Cwm Taf Morgannwg University Health Board (CTMUHB) for the Committee to note, discuss and endorse.

1.2 **Population Health Management** seeks to understand patient populations, groups or clusters by characteristics related to their need and use of health care resources. In CTM one PHM tool has been developed – the PSRS tool - which can help Primary Care Clusters, GPs, ILGs and other partners to decide how best to use limited time and resources to deliver anticipatory and pre-emptive care for patients. Segmenting the population based on a range of factors can identify groups by their holistic need and ability to benefit from anticipatory care.

1.3 The feasibility of the population segmentation and risk stratification (PSRS) approach was previously piloted in the Rhondda primary care cluster. The roll out of this approach forms one workstream of the *Stay Well in Your Community* (SWIYC) Programme of work supported by Transformation funding by the Welsh Government. The aims and objectives of the workstream are available in Annex A and will form part of the wider Population Health strategy for CTMUHB. PSRS supports new models of care being implemented within the other workstreams of SWIYC, in particular, the Enhanced Community Cluster Teams and Assistive Technology. As part of the work, PSRS is being fully evaluated by Welsh Government. Progress on implementation across CTMUHB and evaluation is provided in this update.

1.4 A refreshed business case was submitted to the Welsh Government in June 2020 to implement this approach across other Health Boards. This is pending and no further update on this element is provided in this report.

2. SPECIFIC MATTERS FOR CONSIDERATION BY THIS MEETING (ASSESSMENT)

Implementation of PSRS for CTMUHB

2.1 Following obtaining permission to utilise primary care data from practices in Merthyr Tydfil (MT) and Rhondda Cynon Taff (RCT), a Data Quality Submission application was submitted prior to seeking permission from Bridgend practices, using the same format as for the pilot. The Data Quality Group and GPC Wales requested that roll out of the approach uses data from the SAIL Databank rather than create a new integrated dataset as done in the pilot.

2.2 This approach benefits from the well-developed information governance framework surrounding the SAIL Databank. However, SAIL was developed for research purposes and holds anonymised patient data, whereas the programme requires the supply of indentifiable data to respective GPs which is being accommodated through the support of DHCW and data processing supplier. The technical solution (see Figure 1) has now been agreed with all partners and the IGRP, DPA and DPIA have all been agreed and signed. The Local Public Health Team (LPHT) have worked through the technical and legal details and processes that enable data transfer and processing to happen with partners SAIL Databank, DHCW (formerly NWIS) and the commercial provider Sollis.

2.3 In summary, the Sollis system will be hosted within the SAIL environment. SAIL will make a location available to host the tool and provide a subset of SAIL data. The PSRS analysis will take place within the SAIL environment using algorithms run by Sollis and include a data-driven model developed in-house by the LPHT Analytical team. Sollis will transfer the analysed data to DCHW for data processing and de-anonymisation. Patient level data will subsequently be accessible to GP practices via the GP portal managed by DHCW.

2.4 The primary care data currently available within the SAIL Databank is available from SAIL consenting practices via Informatica and DHCW who complete the linkage and initial encryption and anonymisation of the data to SAIL. This translates into an anonymised linkage field (ALF) within SAIL which is an encrypted unique patient identifier (ID). This patient ID is completely anonymous and has no meaning to practices or secondary users of practice data. A mapping table will be utilized by

DHCW which will map the Audit+ patient ID to the clinical system patient ID once the data leaves the SAIL environment and is analysed and transferred from Sollis. The clinical system patient ID can only be used by practices to identify their own patients and has no meaning to external users outside the practice. SAIL data will therefore remain anonymous but contain an identifier that practices can use in data fed back to the practice. This process will rely on implied consent as the basis for processing at common law as this will be used for direct care purposes.

2.5 Further approval from the Secretary of State via the Confidentiality Advisory Group under Section 251 of the National Health Services Act 2006 will not be required. Small number suppression will be applied at practice level in line with standard data disclosure processes. This will be lawful at common law without any further approvals. Should any data be identifiable on its own or in combination with other data held in the dashboard at any point in future, a legal basis at common law will be established with the health bodies accessing the data.

2.6 A separate research project has been proposed to be conducted by the LPHT in parallel, and will be submitted and approved via its own separate IGRP application, to enable evaluation using standard SAIL anonymised data. Outputs from SAIL will be aggregated for incorporation into an evaluation report. These will be subject to SAIL standard disclosure controls policy.

2.7 Implementation of the Programme was delayed by the need for key staff to prioritise the Public Health response to the Covid-19 crisis. Following these delays and associated resource impacts, the project is following a revised timetable and plan. The rollout will now be implemented in two phases. Phase 1 will roll out to the MT cluster and aims to validate the data-driven model against data gathered during Covid-19 and review the provision of data in outputs 1 and 2. Phase 2 will aim to enhance the reporting and involve the roll out of PSRS to all remaining participating GPs in CTM.

2.8 Provision of anonymised data to LPHT is planned for June 2021, with provision of de-anonymised data to MT cluster late July/early August 2021. Phase 2 is planned for completion by January 2022 (this is subject to the impacts of the third wave of Covid-19 and associated winter pressures).

2.9 A high-level project plan based on the new data flows is available in Annex B. The full project document agreed with partners is available upon request.

Evaluation

2.10 The potential for using utilisation-based cluster analyses to segment a local General Practice-registered population in the RCT cluster was assessed as a pilot during April 2018 – July 2019. A process evaluation assessed the feasibility of the approach and compared the use of a traditional expert-driven segmentation approach with data-driven utilisation analysis. The findings have previously been presented and are available upon request.

2.11 An independent evaluation of workstreams in the SWIYC is being led by the Institute of Public Care (IPC) at Oxford Brookes University. The LPHT will work with IPC to support the evaluation process and plan the time allocated to the PSRS workstream. Logic models have been developed in collaboration with Cardiff University. The PSRS workstream aims to evaluate the effectiveness of PSRS in identifying the health and care needs of the CTMUHB primary care-registered population. This is supported by two objectives:

(1) To evaluate the predictive ability of population segmentation.

(2) To undertake a process evaluation to inform wider roll out of this approach, to other clusters and to other Health Boards.

2.12 There are three components of the evaluation of the workstream to support these two objectives (see Table 1). The predictive ability of segmentation will be assessed as a separate research project in collaboration with SAIL and is underway. Further analysis of healthcare use post-PSRS implementation will be undertaken in future using SAIL data. Findings from a process evaluation will support quality improvement cycles of the work within CTMUHB and any future roll out of the work across other Health Boards.

2.13 The evaluation does not include evaluation of specific interventions which are implemented using the findings of the segmentation, over and above identifying the added benefit that segmentation offers. For example, the Enhanced Community Cluster MDTs which are being implemented as a separate workstream within the SWIYC programme. These will be evaluated separately. However, this evaluation will work closely with this workstream to ensure any outcomes which support evaluation of segmentation are measured using a prudent, coordinated approach.

Next steps

- Continue roll-out of PSRS across CTMUHB using the proposed technical solution aiming for provision of data to primary care in July/August 2021 and LPHT in June/July 2021.
- Continue evaluation of PSRS and use this to inform delivery.
- Await a decision from the Welsh Government regarding provision across Wales.

3. KEY RISKS/MATTERS FOR ESCALATION TO BOARD/COMMITTEE

None

4. IMPACT ASSESSMENT

Quality/Safety/Patient Experience implications	There are no specific quality and safety implications related to the activity outined in this report.
Related Health and Care standard(s)	Staying Healthy
	If more than one Healthcare Standard applies please list below:
Equality Impact Assessment (EIA) completed - Please note EIAs are required for <u>all</u> new, changed or withdrawn policies and services.	No (Include further detail below) If yes, please provide a hyperlink to the location of the completed EIA or who it would be available from in the box below. If no, please provide reasons why an EIA was not considered to be required in the box below.
	EIA not required as this report is an update to population health management approach previously agreed. EIA to be completed in next stage of implementation.
Legal implications / impact	There are no specific legal implications related to the activity outlined in this report.
Resource (Capital/Revenue £/Workforce) implications / Impact	There is no direct impact on resources as a result of the activity outlined in this report.

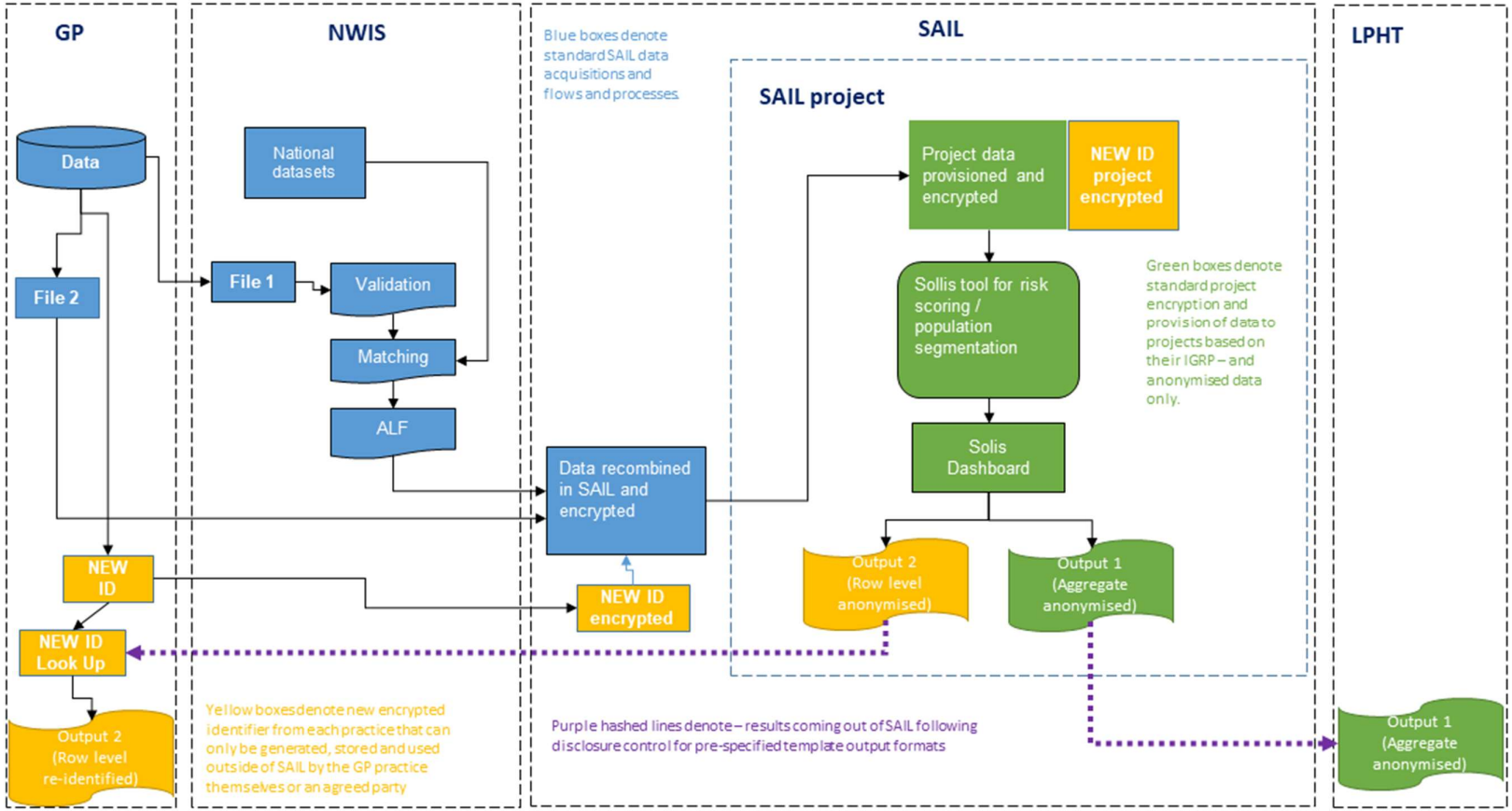
Link to Strategic Well-being Objectives	Work with communities and partners to reduce inequality, promote well-being and prevent ill-health

5. RECOMMENDATION

5.1 The Population Health and Partnerships Committee is asked to:

NOTE the report and **ENDORSE** the approach to Population Health Management outlined in this report.

Figure 1: Data flow for the proposed technical solution



Note: this map of data flow does not distinguish between current process that are already in place (data flows from GP to DHCW, and DHCW to SAIL) and processes that will be adapted as part of this project (data flows within SAIL and out to GP and LPHT via the Sollis application (operating within and outside the SAIL environment)). It also does not depict the project actions e.g. IGRP and DQS applications (please see project action plan).

This map requires an amendment for output 2, whereby it will be provided via DHCW (formerly NWIS) to the GP portal.

Table 1: Elements of the evaluation of the PSRS workstream

Evaluation aspect		Timescales	Aim(s)	Objective(s)	Data source(s)
1.	Predictive ability of segmen-tation	Under way since September 2020, segmentation model for rollout completed in June 21, report on predictive ability to be submitted in autumn 2021	To assess whether and to what extent segmentation can predict future health care use	a) To assess the predictive ability of traditional versus data-driven segmentation in relation to healthcare use (combined settings and individual measures) b) To determine the rates of transition between segments (stability of segmentation over time) and underlying factors driving this. c) To assess whether segmentation at cluster or Health Board level is different. d) To determine whether a new combination of existing variables in the segmentation could improve prediction of future healthcare need.	SAIL Databank
2.	Analysis of healthcare use post segmentation and risk stratify-cation implement-tation	TBC (will require a follow-up period of approxi-mately 1 year post-August 2021)	TBC	TBC	SAIL Databank
3.	Process evaluation of implement-tation	Ongoing to support quality improve-ment cycles	To learn from the imple-mentation of PS and use it to inform delivery	a) To assess the feasibility and practicality of using SAIL as a data source b) To determine the most effective data flow processes c) To determine whether GP practices can access the outputs of PSRS d) To estimate the resource demands on GP practices of using this approach e) To determine whether the LPHT has sufficient information to support primary care clusters in taking action on the outputs from PSRS f) To determine whether PSRS offers added benefit over population segmentation alone g) To determine whether the patients identified by PSRS would have been identified without PSRS and any resource implications this may have h) To establish the resource implications of this approach	TBC - multiple

ANNEX A: AIMS AND OBJECTIVES OF THE PSRS SWIYC WORKSTREAM

Aims

a) To undertake population segmentation and risk stratification for the primary care-registered population of CTMUHB using data from the SAIL Databank.

b) To provide GP practices with patient-level identifiable information on the health and care needs of patients registered in their practice using individually assigned segments and risk stratification scores.

c) To evaluate the effectiveness of population segmentation and risk stratification in identifying the health and care needs of the CTMUHB primary care-registered population.

Objectives

i. To establish the processes by which data will flow in the project.

ii. To set out the roles and responsibilities of all parties collaborating on this project.

iii. To ensure all legal and information governance requirements for data sharing, processing and dissemination are met.

iv. To ensure GP practices are provided with information on the segmentation and risk stratification of individual patients in a format that allows that information to be easily linked to patient records.

v. To ensure the Local Public Health Team (LPHT) are provided with sufficient information to: (1) support GP practices in the interpretation and use of the data; and (2) to consider, advise and/or initiate effective interventions for patient segments and risk strata in their population.

vi. To ensure that this project closely aligns, and that outputs produced are compatible, with any separate research projects undertaken by the LPHT to evaluate the effectiveness of population segmentation and risk stratification.

vii. To undertake a process evaluation to inform wider roll out of this approach, to other clusters and to other Health Boards.

viii. To evaluate the predictive ability of population segmentation.

ANNEX B: PSRS WORKSTREAM PROJECT PLAN

Task No	Week beginning - **Update as Necessary**	Start	End
1	Confirm viability of using SAIL	04.11.19	04.11.19
2	Produce Project Brief to clarify requirements	05.11.19	06.12.19
3	Confirm data flow & technical requirements for using SAIL	06.12.19	20.12.19
4	Sign off on data flow and technical requirements	20.12.19	20.12.19
5	SAIL /Sollis draw up aligned agreement on access.	04.12.19	20.12.19
6	Complete & submit application to SAILs IGRP	20.12.19	17.01.19
7	IGRP internal review process - 4 weeks	17.01.20	14.02.20
8	IGRP external review process - 8 weeks	14.02.20	10.04.20
9	Gain approval of SAILs IGRP	10.04.20	10.04.20
10	Draft DPIA for sign off	05.01.20	14.02.20
11	Commence Drafting DPA for sign off	14.02.20	10.04.20
	COVID PAUSE	Mar/April 20	Sept/Oct 20
12	Review and refresh plans	01.09.20	01.10.20
13	Supply ready to supply	01.10.20	01.01.21
14	Finalise contracts and agreements	01.01.21	01.04.21
15	Procure Server for SAIL to host Sollis	01.02.21	01.03.21
16	Complete drafting and sign off of DPIA	01.02.21	16.06.21
17	Complete drafting of DLA and CMTUHB sign off	01.02.21	16.06.21
18	Set up Server for SAIL to host Sollis	15.05.21	15.06.21
19	SAIL Provision Data batch	06.06.21	06.06.21
20	Sollis / LPHT finalise CMT Segmentation model for use	01.06.21	15.07.21
21	Sollis Map and Process Data (PSRS)	16.06.21	17.07.21
22	SAIL check data outputs	18.07.21	18.07.21
23	Sollis deliver output 1 data to the LPHT via Clarity + quarterly thereafter	19.07.21	25.07.21
24	SAIL deliver output 2 data to DHCW	19.07.21	25.07.21
25	DHWC process data and deliver to the Merthyr GPs – PH 1	26.07.21	20.08.21
26	All data reports are reviewed and refined	01.07.21	30.08.21
27	Developments are documented, planned and built	01.07.21	30.08.21
28	DHWC process data and deliver to Merthyr and the other CMTUHB area GPs – according to the programme plan	01.09.21	01.10.21
29	Data provision, processing and delivery to run Qtrly to LPHT	Jan 2022	Jan 2023
30	Data provision, processing and delivery to run Qtrly to GPs	Jan 2022	Jan 2023