

Swimlane Journey Mapping Project Framework



Changing Futures Sussex
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 Ministry of Housing,
Communities &
Local Government

Acknowledgements

We would like to acknowledge the collaborative work required to undertake this and any future costings work. Special thanks to Louise Patmore (Systems Change & Learning Coordinator, Changing Futures) for leading the Swim Lanes project, Emilie Bellhouse (ST1 Public Health Registrar, East Sussex County Council, as lead author of this report, Martin Powell and Lauren Payne (Project Delivery Officers for Changing Futures) who created and tested multiple iterations of the journey maps, as well as other members of the working group and delivery teams in Changing Futures Sussex for technical and operational support.

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Introduction

Changing Futures is a four-year government funded programme aimed to help adults facing multiple disadvantage. Multiple disadvantage or multiple compound needs (MCN) has been defined as adults facing combinations of homelessness, mental health issues, domestic violence, substance misuse and criminal justice involvement. The overarching aims of the project have been to improve the lives of those facing MCN through:

1. Stabilising and improving the situation of this group
2. Transforming local services to provide person centred approach
3. Testing different approaches to funding, accountability and engagement between commissioners, services and government¹.

To respond to this final aim, Changing Futures Sussex have been developing an approach to monitoring and evaluating the public service interventions for adults experiencing MCN. Changing Futures Northumbria previously adopted this Swim Lanes approach, in partnership with the Integrated Care Board and Northumbria University, as part of their larger project The Burning Platform².

These projects ultimately hope to explore the issue of poorly presented data for people experiencing MCN, leading to a lack of understanding of what works to prevent poor outcomes when faced by this group. This hopes to eventually lead to evidenced based system and service change.

This document outlines the approach, including its rationale, and details the specific methodology adopted by Changing Futures Sussex.

Aims and Objectives

The driving force behind the need for system change is that people experiencing MCN face compound deprivation, which means they often fall into the high cost, high need service users group^{3,4}. For healthcare alone this has been described as patients with annual NHS costs 20 times higher in the top 5% compared with all other patients⁵. For those experiencing MCN the Fulfilling Lives evaluation found that on average £448 per person is spent via public order and safety, but for their clients over £6000 was spent⁶. This shows the contrast between the cost of the average client and the cost of a client experiencing MCN., The Changing Futures prospectus estimates that clients facing MCN cost the state five times more than an average citizen annually³.

However, there does not seem to be any clear method to quantify, or demonstrate this high usage across the entire system, which is a unique issue to people experiencing MCN who use multiple services. Therefore, there is no real understanding of the overall effect of ongoing MCN

on services or the effectiveness of prevention strategies, leading to ongoing system costs and pressures.

The overall aim of the project was to develop and evaluate a novel approach to monitoring use of public services by adults with MCN and seek more rapid clarity on prevention opportunities and correlations between planned and unplanned interventions.

The Swim Lanes project in Sussex, was presented as a visual theory of change (Appendix 1) which identified the root causes and effects of the lack of a system-wide approach to monitoring and evaluation of service usage⁷. Through the current evidence base we identified the major causes to be the complex, and competing needs of those experiencing MCN which interact with the whole system^{2,3,4}, siloed working of current services^{2,4}, the use of lagging metrics in healthcare², and resource and budget allocations linked to current metrics². All these causes link to the central problem that it is hard to measure and present any form of success in adults experiencing MCN. This leads to effects such as lack of clarity on effective prevention strategies, difficulty sourcing long term funding, reduced resources for those with multiple disadvantage^{3,6}, ongoing pressure on urgent services from this group^{3,4,6}, ongoing inability to prevent poor outcomes in people experiencing MCN, and ultimately poor health and social care outcomes for this group and subsequent generations^{2,3,4,6}.

This exploration of the problem led to the Logic Model for the Swim Lanes project (Appendix 2); with key actions aimed to directly mitigate current causes of the issue highlighted in the Theory of Change⁸. Immediate actions were to collect data on service usage across organisations,⁹ and to present costed journey maps for Changing Futures Sussex clients to stakeholders. Longer term aims would be to use Swim Lanes to identify leading metrics for this client group as an answer to traditional metrics, to better measure and evaluate interventions aimed at supporting them^{10,11,12}.

Therefore, the project objectives were:

1. Map at least two client journeys per Local Authority area
2. Use this mapping process to iteratively develop a methodology, including data sharing and development of agreed costings
3. Understand and explore how Changing Futures involvement impacts cost on wider public service usage
4. Explore whether Changing Futures involvement reduces unplanned or urgent care interactions, as a proxy measure of system pressure

This document will include:

- Detailed methodology of data collection and analysis
- Limitations to the methodology
- Key considerations for introducing the methods in your area (see Appendix 3)

The Swim Lanes concept involves using journey mapping methodology to collect and organise the various interactions and costs a client with Changing Futures experiences before and during their involvement with the programme.

Journey mapping methodology is an established methodology in non-healthcare sectors and is known to be useful in showing how a client navigates a system¹³, and to show interactions between services¹⁴. More recently it has been used within a health and social care setting and is showing promising opportunities to understand barriers and enable identification of responsive and context specific strategies to improve patient/client care^{13,15}. Additionally, journey mapping has been found to be useful to map interactions with different aspects of the system to explore points of stability and pivot points in that client's journey¹⁵.

This methodology also hopes to identify different types of interactions, such as crisis interventions or planned interactions. This is particularly important for adults who experience MCN as they are understood to use a significant amount of high-cost urgent care, rather than lower cost pre planned services.

Methods

The first step was to invite Changing Futures Northumbria to share insights from their work and then begin conversations with people in Sussex around levels of interest and project feasibility. Several iterative tests of methodology were undertaken, reflecting on what outcomes were emerging.

Working group

A working group for the project was established with the following membership:

- Changing Futures Programme Lead
- Changing Futures Systems Change and Learning Coordinator
- Changing Futures Project Delivery Officers from each Local Authority
- Public Health representative from East Sussex County Council
- Representative from Making Every Adult Matter (MEAM) coalition

The group was established to develop the methodology, feedback any issues, and allowing for consensus on any variations of methods across the region. The group participated in a peer led National Community of Learning for Changing Futures where a lot of the national conversations around cost avoidance analysis for this cohort have taken place.

To achieve the level of data collection and analysis required to complete one cross service Swim Lane multiple preparation steps were required. The key components to achieving this were information and research governance, data sharing agreements, and client consent.

Information and Research Governance

After consultation with local information governance guidance¹⁶, Changing Futures were able to collect personal data as part of their normal working model. This could then be used as

secondary data for service evaluation. Secondary data is usually defined as data that has been gathered within the normal functions of a service¹⁷.

No formal research governance was sought as the project comes within Changing Futures overall system change and learning aims. However, any further applications of this work as defined by the Health Research Authority research decision tool would require local research governance approval¹⁸.

Data Sharing

The local delivery was supported by a data sharing agreement, and memorandum of understanding between Changing Futures Sussex and the respective Local Authority, as well as partner organisations such as local substance misuse services, and voluntary sector teams. These allowed for client's personal data to be shared across organisations for the use by the multi-disciplinary team to function effectively, (public task).

All identifiers were removed prior to sharing the data with the wider Programme team. This subsequently allowed for data processing of Swim Lanes data as part of Changing Futures aim to work towards system change.

Consent

Although data collected by Changing Futures could be used without specific consent in an evaluation setting, (consent to share data for evaluation purposes had already been sought), we chose to specifically seek consent from clients to access their data from *other sources* prior to their involvement with Changing Futures and involve them explicitly with the Swim Lanes project. The consent form used for this is in appendix 4.

Data collection

Changing Futures Sussex works across East Sussex, West Sussex and Brighton and Hove Councils; as such data collection was completed over a number of months by a single member of staff within each local authority. The working group met regularly to share learning as the concept developed, and to standardise the approach to data collection and input.

A member of the Changing Futures Sussex programme team (hosted by West Sussex County Council) was seconded to each Local Authority and sat within that organisation working alongside their respective delivery teams. This allowed capacity for data collection to take place within the Local Authority, rather than relying solely on staff supporting clients directly. Initially no specific training was given as named individuals formed part of the working group and the data collection was an iterative process. Once a standardised template was established, data collectors were given guidance on the excel sheet and definitions of each term.

As previously noted, the use of journey mapping in health and social care is novel, as such, it has been noted that there was no standardised approach¹⁹. Research notes that a flexible approach is useful to ensuring the journey map meets specific aims for the project, but it must be underpinned by robust methodological standards.

Techniques we used to do this were:

- Complying with research ethics, consent and data protection as noted above.
- Utilising pseudonyms on data saved within our spreadsheets.
- Adopting a standardised approach to data collection across the three Local Authorities.
- Collecting all data prior to analysis to prevent skewing data.
- Sourcing as much data and up to date financial information as possible.
- Acknowledging gaps in data.
- Analysing our data in line with research aims and objectives.
- Providing transparency on methods via this document.

Organisations, data systems, and information access

Local Adult Social Care case management systems were accessed to populate most of the Swim Lanes, this included LAS, Eclipse, and Mosaic. These systems are used in normal practice to log interactions relevant in addressing clients' social care needs, therefore often hold data about contact with partner organisations, e.g. police interactions, or housing situation.

For other organisations working within the MDT, such as voluntary sector or substance misuse, individual conversations took place between peer workers, or organisational link workers to establish any additional interactions with the named client.

Data collected and how it met our aims

In this case we only collected secondary data; no primary interviewing took place which we understand to be an established methodology in other forms of journey mapping. In a previous iteration of the swim lanes there was one 1:1 interview with a client to create a swim lane, during which their experiences over a number of years, spanning repeat homelessness, difficult relationships and multiple service interventions was recorded. Although this data was too anecdotal in the context of the project's quantitative aims, as it was not possible to validate the timelines of the experiences, the insights provided a powerful story of the systemic limitations of public service delivery which warranted further exploration. The process developed into utilising staff notes from data systems as a more robust and transparent tool to collect data.

This data was collected to meet objectives 1,3 and 4; and forms the quantitative element of the Swim Lane.

Data points collected included:

- Overarching sector/type of service. E.g. Health, Criminal Justice,
- Type of intervention within said service, e.g. ED attendance, GP appointment
- Number to instances of each intervention in a given month
- Month and year each interaction occurred

- If the interaction was before or during Changing Futures involvement
- Associated costs
- Whether that interaction was statutory or non-statutory
- If the interaction was urgent or planned care

Data was inputted into an excel sheet with prefilled drop-down menus for each of the data points above to standardise data collection and allow for different team members to input data as required. Each blank Swim Lane excel sheet had additional tabs with definitions of each data label (See Appendix 5). Figure 1 shows the spreadsheet set up.

| | A | B | C | D | E | F | G | H | I | J | K |
|---|------------------|-------------------|------------------------------|--------|---|--------------------|------------|----------------------|---------|------------|----------|
| 1 | Select | Select | Enter # (Hours only for CF) | MM/YY | Select | Auto | Auto | Enter Manually | Auto | Auto | Auto |
| 2 | Category | Intervention | Number of incidences / hours | Month | Pre or Post entry to Changing Futures Programme | Cost per incidence | Total Cost | Additional Narrative | Urgent? | Statutory? | Planned? |
| 3 | Changing_Futures | Adult Social Care | 2 | Sep-24 | During_or_Post_Changing_Futures | 46.00 | £ 92.00 | | NO | NO | YES |
| 4 | | | | | | £ | £ | | ✓ #N/A | ✓ #N/A | ✓ #N/A |
| 5 | | | | | | £ | £ | | ✓ #N/A | ✓ #N/A | ✓ #N/A |
| 6 | | | | | | £ | £ | | ✓ #N/A | ✓ #N/A | ✓ #N/A |

Figure 1 spreadsheet used for data collection of the swim lanes.

Each data label was discussed within the working group to establish a standard definition across Sussex, and a definition that is meaningful for each area within Changing Futures Sussex.

Specific labels were created to aid analysis, and ability to answer our objectives. For example, labelling every interaction as urgent or planned care helps to answer if Changing Futures involvement steers clients with multiple disadvantage more into planned care services rather than costly urgent care, which is an established theme of their interactions³. Appendix 5 outlines all data entry options and explains the meaning of each.

Time points

The working group chose to collect data at monthly time points; 12 months prior to Changing Futures involvement and all subsequent interactions. This was agreed to offer a standard approach across the regions, and across clients who had different lengths of service involvement over time. This is also a reasonable approach, based on time trend analysis an established public health methodology which advises gathering data at equal time intervals to measure and monitor trends²⁰. This is particularly useful in the setting, as stated above people with multiple compound needs often fail to meet traditional success criteria creating a problem of presenting meaningful data on their behalf^{2,4}. We know from the MEAM evaluation that people experiencing Multiple Disadvantage can start experiencing positive change over a 9-18 month period, but also that this group make positive change at different rates, as such we feel this choice of data collection points will offer meaningful analysis and results⁴.

Costings

Costings were inputted from the GMCA data base²¹. This is an established costings database for UK costings developed with government departments and recognised by the treasury²¹. Where costings were not provided from this source additional costings were sought via Ministry of Housing, Communities and Local Government approved sources²²⁻²⁷. Some costs were unavailable, and gaps identified in service outputs, so locally agreed proxies were established²⁸.

The method for establishing local proxies was participatory action research with co -design from chosen participants. this requires ongoing, iterative refinement, and collaborative analysis for more comprehensive investigation and ratification. A full costings database for this project is within Appendix 6.

Analysis

The analysis was designed to answer objectives three and four; where we hoped to explore and understand the system and financial pressures created by people experiencing MCN. This group are known to be high need, high-cost service users therefore the focus of the analysis looked to understand these interactions across the entire system. The analysis utilised Microsoft Excel’s pivot table function to visually investigate each client’s interactions and costs across the system.

Analyses undertaken were:

- Number of interactions across all services over time
- Costs over time
- Analysis of planned vs unplanned interactions pre and post Changing Futures intervention
- Analysis of interactions by service
- Costs per sector

Data was presented via Power Bi software which used excel spreadsheets to present data as shown below in figure 2.

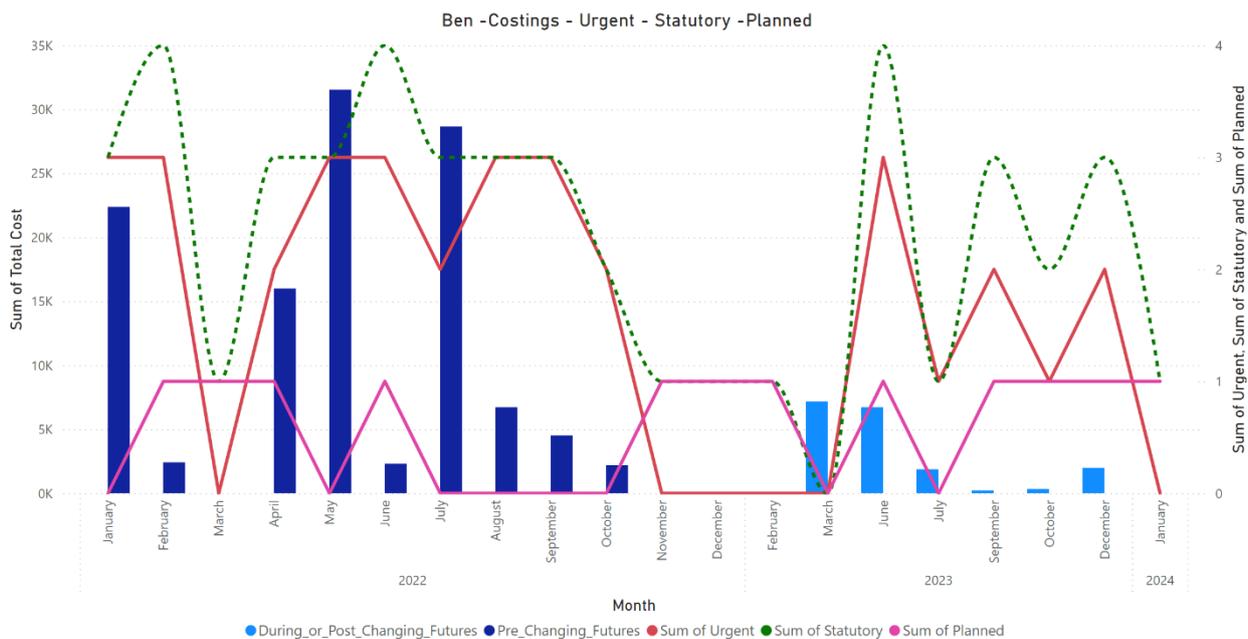


Figure 2 shows an example swim lane data from client “Ben” (Pseudonym), looking at interactions pre and post changing futures and the statutory and planned interactions.

Limitations

The methodology is still under development, as such this initial process is subject to many limitations which we outline below.

Theoretical

The Theory of Change was constructed using both evidence and the teams experience of working with people with multiple compound needs locally. For example, “siloes working and individualised service metrics contributing to difficulties in presenting data for those experiencing MCN” is an observation from within the programme. Although valid in the context this is an assumption without a robust evidence base and as such is a limitation to this work.

Methodological

There are multiple methodological limitations. First the difficulty in standardising the process when Changing Futures Sussex works across two County Councils and a Unitary Council area, with different service providers and team configurations. This will likely create some inaccuracies in the data collection, but this will have been mitigated by the working group’s ongoing feedback.

Secondly there have been significant gaps in the data collection, for example for some cases we noted that there was no social work engagement recorded for the time prior to Changing Futures. This is an expected limitation because the target cohort for Changing Futures are individuals whose needs are not currently being met by public services and have previously ‘fallen through the gaps’ in service provision, so gaps in support is a given.

Thirdly, it is difficult to get local and approximate unit costings. The unit costings show a national picture accounting for inflation, but they are understood as a minimum cost. The actual unit cost per intervention will depend on local costs, time, and number of individuals or services involved. Differentiation is then required between planned costs that positively support an individuals’ journey and unplanned or urgent costs that could have been avoided.

In addition, the sample size is small, and prone to selection bias. This was an active choice during the process as certain cases were chosen to test and understand the methodology, however they will provide skewed results. The limitation to time series analysis of seasonal trends affecting data, particularly in this situation where there is no control case, although this should be mitigated by the number of time points gathered²⁹

Ethical / legal

We stated that the project worked iteratively which means we need ongoing ethical oversight to review changes and ensure that the individual's information and experience is protected and treated with care.

Ethical consideration of costing human experience without qualitative account reduces individuals to financial value

As noted above there are gaps in the data set due to data sharing restrictions between organisations, and limitations to wider dissemination at present due to the lack of consent for research.

Future applications

Leading metrics

To date most health and social care metrics would be described as lagging indicators, where they describe the outcome or the goals of a service¹¹. In contrast, a leading indicator is a measurable indicator that aims to predict the performance of a service. They are often used in economics and business to predict future performance, and as an early warning sign of issues¹⁰.

For example, a business might currently use customer satisfaction as their outcome measure, or lagging indicator, but could add number of calls to customer service, or activity on the FAQ pages as a leading indicator¹².

The use of leading indicators in healthcare is novel, but increasing adoption of quality improvement methodology and continuous learning cycles as a key driver for health and social care development would benefit from the use of new indicators²⁹. This would function as a way of interpreting and acting upon continuous learning; and allow for whole system responsiveness to service pressures from this group³⁰

In addition, we would hope to create a toolkit which could be used operationally to allow services to react to different scenarios faced by individual clients.

Qualitative

A key objective of the whole Changing Futures programme is to be trauma informed, co-produced and client centred^{1,3}. Therefore, another future application of this work is to embed client experience into the swim lane to identify experience-based metrics for positive change. For example, this may help to highlight triggering events for relapse or reduced engagement, or particularly positive interactions with case workers which we know both have effects on client journeys.

Future Objectives

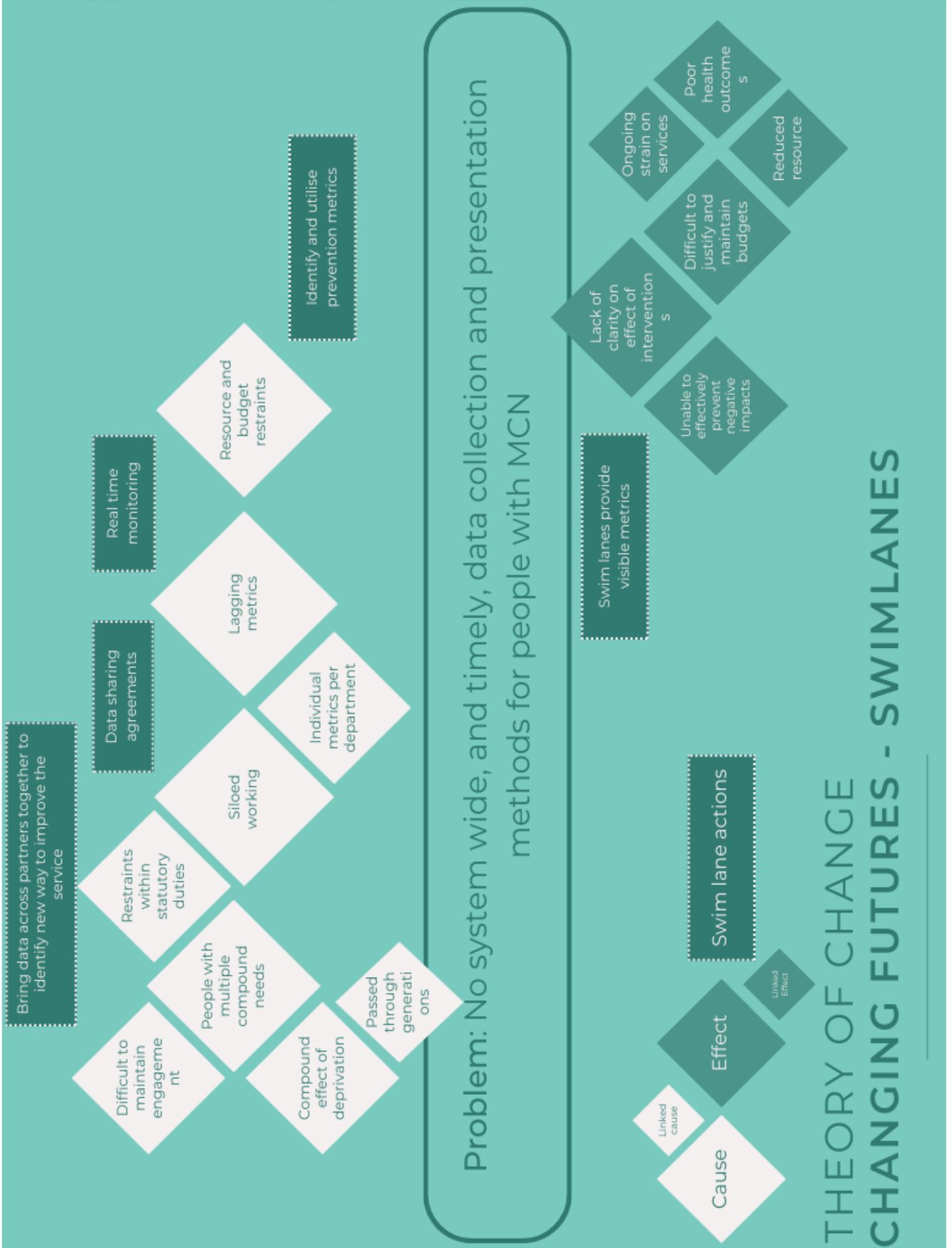
1. Work with further external partners to feed data into Swim Lanes to build a more comprehensive picture of service use across healthcare, support and criminal justice domains
2. Expand the research to address current limitations and ethical considerations, in particular, data sharing
3. Identify pivot points within a patient/client journey
4. Link into national pieces of work on cost avoidance for individuals experiencing MCN
5. Consider how client experiences and voices can be fully integrated into the evaluation
6. Create leading metrics for whole system responsiveness to MCN pressures
7. Create a framework for services to use to improve the care of people with MCN

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Appendix 1 - Theory of Change



Appendix 2 - Inputs, Activities and Outcomes

CHANGING FUTURES SWIM LANES

Inputs

- Systems change lead
- Project delivery officer
- Case worker buy in
- Digital services
- Project support
- Data sharing agreements

Setting Assets

- Deprivation in the areas means there are clients with multiple compound needs utilising the service

Planning Activities

- Cement and update data sharing agreements for evaluation and research
- Develop tools for methodology
- Train staff to understand and work on swim lanes
- Understand leading and lagging metrics in healthcare
- Link with other data sets
- Consider data as a dashboard

Delivery activities

- Create a framework for swim lanes
- Update costing
- Present swim lanes project to relevant connected systems and explore system change possibilities
- Create swim lanes for Changing Futures clients across Sussex
- Cost swim lanes
- Present swim lanes at relevant progress review and funding meetings
- Analyse swim lanes data thematically and statistically

Initial impacts

- Development of the swim lanes concept
- Swim lanes allow for clients lived experience to be presented as data
- Thematic analysis identifies previously unknown positive change within clients journey's
- Statistical analysis identifies trends that could be considered as prevention metrics

Short term outcomes

- Lived experience utilised in programme, strategy, and policy creation.
- Larger uptake of swim lanes concept across changing futures programmes
- Further analysis to strengthen initial knowledge gained from Sussex

Long term outcomes

- True prevention metrics created
- System wide improvement for people with Multiple Compound Needs
- Gaps in the system more easily recognised
- Sustainable system wide data available for ongoing research and evaluation

Assumptions

Generalisable prevention metrics exist for this population
Prevention metrics are a useful tool in this setting

Possible barriers

Data sharing agreements
Inability to shift away from focus on fiscal metrics due to budget restraints
Available time and resources to take project to latter stages
Limited client data inhibiting depth of analysis
Pan Sussex programme means working across three local authority areas.

Appendix 3- Checklist of Key Considerations

Checklist of key considerations for introducing the methodology in your area

| | |
|---|--|
| Establish a working group to support the development and progression of the project, identifying key roles for each member and terms of reference | |
| Consult information and research governance leads in your area early to clarify specific requirements to collect and analysis data | |
| Clearly define aims and objectives that you hope to achieve, prioritising those to your timeframe | |
| Explore and agree cross system data sharing agreements early, considering why you need data against your objectives, and what data is available to use from which data base | |
| Training and access requirements for data systems required take time | |
| Define data collection terms clearly, especially if the project worked across authority areas as well as systems | |

Appendix 4 - Swim lanes excel sheet data points

Data points 1 & 2

These data points are linked, once the Service category column was populated this would filter the intervention column to interventions offered by that service.

| Service category | Intervention |
|-------------------------|--|
| Changing Futures | Adult Social Care Navigator / Support Work Mental Health Peer Support |
| Police criminal justice | Arrest ASB Incident ASB Order Callout No Further Action (NFA) Prison Sentence Probation Appointment Court time Court: Breach Offence Court: Criminal Damage Court: Drug Offence Court: theft and stolen goods Domestic Violence Incident Drug Rehabilitation Order Number of rape incidents Call-Out Assist SCARF Report Section 136 detention Summons Wellbeing visit Domestic Violence Prevention Order |
| Health | A&E Attendance Amb Other Amb S&C Amb S&T Day visit general GP cost per hour MH Section Nights in hospital Overnight Stay Scan or other Self-Discharge |
| Mental health | A&E MH Section Abscond before MH Assessment Acute stay Community Intervention ATS / AOT / EIP |

| | |
|------------------------------|--|
| | <p>Community Intervention crisis services</p> <p>Crisis Café</p> <p>Deprivation of Liberty Safeguarding</p> <p>Detained Awaiting Admission</p> <p>Haven</p> <p>Initial MH assessment</p> <p>Telephony</p> |
| Drugs and alcohol | <p>Community Rehab</p> <p>Detox</p> <p>Prescribing</p> <p>Residential Rehab</p> <p>Community Intervention</p> |
| Housing | <p>Emergency accommodation night</p> <p>Eviction</p> <p>hotel</p> <p>Night sleeping rough</p> <p>Notice to Quit (Section 21)</p> <p>PRS</p> <p>Refuge Accommodation per day</p> <p>temporary accommodation / night</p> <p>Council Stock</p> <p>Supported Accommodation</p> |
| Social care and Safeguarding | <p>Care Act Assessment</p> <p>Care and Support Plan</p> <p>Core Conversation</p> <p>Engagement with ASC worker</p> <p>Hoarding</p> <p>MC Assessment</p> <p>Out of Hours Support</p> <p>Safeguarding Enquiry</p> <p>Safeguarding Plan</p> <p>Section 42 Safeguarding Notification</p> <p>Specialist support team intervention</p> <p>Safeguarding Plan Review</p> <p>DoLS</p> |
| Fire Service | Fire Engine Call Out |
| Domestic Abuse | MARAC Intervention |

Data points 3-8

| Column name | Explanation |
|--|---|
| Number to instances | The number of above interactions that occurred in a given month |
| Month | When the interaction occurred Displayed as MM/YY |
| Pre or post entry to Changing Futures programme | If the interaction was before or during Changing Futures involvement |
| Associated costs Cost per incidence Total cost | Cost per incidence column is then auto populated from the associated costing sheets Total cost is the cost per incidence multiplied by the number of interactions that occurred. |
| Urgent? | Whether the interaction was urgent |
| Statutory? | Whether that interaction was statutory or non-statutory |
| Planned? | If the interaction was emergency or planned care |

Appendix 5- GMCA Unit Cost Database

The GMCA unit cost database can be downloaded here:

<https://www.greatermanchester-ca.gov.uk/what-we-do/research/research-cost-benefit-analysis/>