Client Service Matching

We match our clients with services that are likely to help them the most

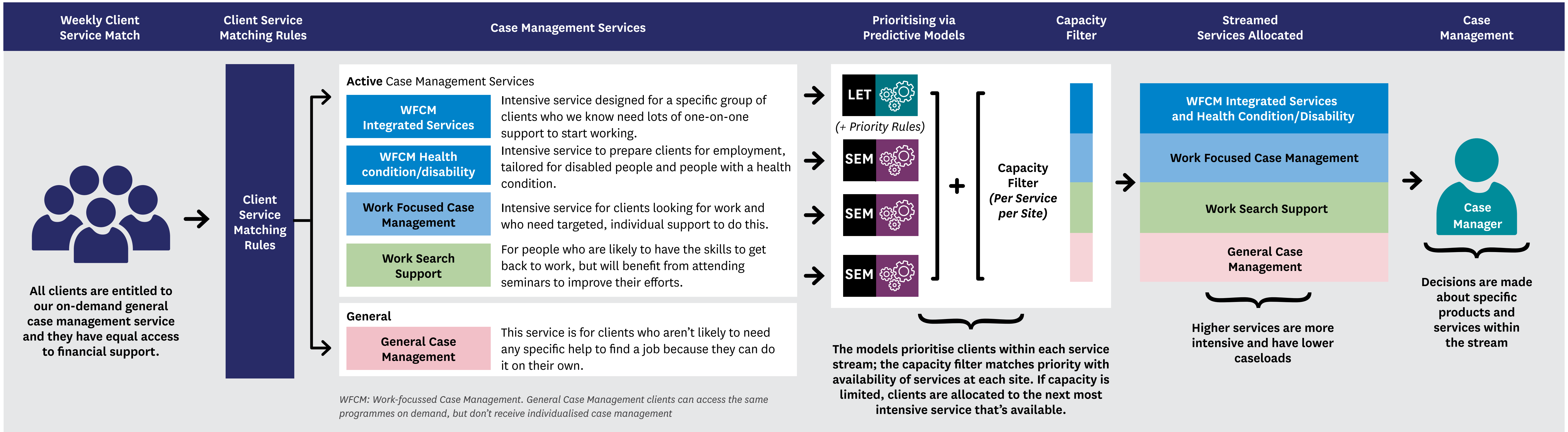
MINISTRY OF SOCIAL DEVELOPMENT
TE MANATŪ WHAKAHIATO ORA

Our case managers provide clients with financial assistance and advice in times of hardship, and support them to find a new job.

All clients are entitled to our on-demand general case management service and they have equal access to financial support.

However, we know that people respond to help in different ways. Some of our clients may need a more active case management service to help them get back to being independent. Active case management makes sure our case managers are more available to clients who need it. Case managers for active services are more proactive — they will contact the client directly, even if the client hasn't asked for help.

Because our case management resources are limited, we've developed a method using two statistical models to match clients with case management services that are most likely to work best for them. This document outlines how we use these models and what safeguards we have in place to ensure our clients and their personal information is protected.



The Client Service Matching rules

Client Service Matching uses a set of rules to determine the best case management service. Different services are designed to serve specific groups of clients so the rules help us provide the right service to the right client.

We consider each client's situation, including factors such as:

- their age
- the length of time they have been on a benefit
- any part-time or full-time work obligations
- any health condition or disability
- the status of any children in care.

Not all our clients may need intensive services. An example is when a client is exempted from looking for work. Sometimes clients may be eligible for more than one active case management service.

We prioritise clients using two predictive models

After we have applied the rules of Client Service Matching, we prioritise clients within each service stream using two predictive models.

1. **The Service Effectiveness Model predicts the best service for clients**

The Service Effectiveness Model (SEM) uses information about clients, such as their age, gender and their history of receiving a benefit from us. This includes how long they have been on a benefit, if they've been on a benefit before (and if so, how long ago), the amount they receive in supplementary payments, the number of days since their last Special Needs Grant, and the reason they went off any previous benefit.

The SEM takes this information, and compares it with the experiences of other clients to generate a priority indicator that tells us whether a client is expected to have a more positive outcome from an intensive service compared to a less-intensive service. A positive outcome means a client is more independent and needs less support.

2. **The Liability Estimator Tool helps us predict which clients will benefit from Integrated Services**

Work-focussed Case Management for Integrated Services (WFCM-IS) is an active case management service is designed for specific clients who we know need lots of one-on-one support.

We use a model called the Liability Estimator Tool (LET) to help us prioritise these clients because the SEM model has too little information about this group to reliably predict the people who will benefit from this service.

The LET estimates the lifetime future benefit cost of a client. It uses variables such as benefit type, age, number of children and age of youngest child, last reason for receiving benefit, history of benefit spells, number of benefit spells due to a health condition or disability and number of ad-hoc hardship payments and produces a priority indicator. The priority indicator acts as a proxy for the likely need of our most intensive service.

The output from the models is filtered by capacity

The Capacity Filter takes the priority level allocated to each client and matches it with the amount of services available at each of our service centres.

If the number of high-priority clients is larger than the available capacity for an intensive service at a service centre, we allocate those clients who qualify but don't get in to the next case management service available.

Case managers and clients work together

A case manager works with the client to agree on the specific support the client receives. A case manager is able to recommend a change to the client's level of case management, or delay a client from engaging with a particular service, based on what they've learnt from the client.

We protect clients and their information

We have run the SEM and LET models through our framework for Privacy, Human Rights, and Ethics. The framework provides assurance around the privacy, human rights and ethical implications of using clients' information.

The client information used in each model is limited to data that has been identified as necessary, only data that impacts on the model output (in other words, data with predictive power) is used in the model. We only use information we collect from clients in the course of them applying for and getting a benefit.

Clients' SEM and LET priority indicators are not visible to staff or clients. The models are housed in our data warehouse which is a secure systems with appropriate access controls. A continuous-improvement programme ensures it stays secure and fit for purpose.

We maintain and review the models

A team of analysts monitor the models weekly to check they're working correctly and to identify anomalies. We measure the accuracy of the model's predictions with the gains statistic. Gains describes how well our models rank clients from high to low. The gains measure is expressed on a scale of 0 to 1, where 0 is random ordering and 1 is a perfect ranking. The LET model has a score of 0.86, and the SEM submodels (one for each service) vary from 0.64 to 0.83.

We regularly review whether the models continue to be fit for purpose. We trial different ways of delivering the service and our results guide the overall design of the service.