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Te Kaporeihana Āwhina Hunga Whara

Version 1.0

Privacy Impact Assessment:

Statistical models used to improve the claim registration and approval process

August 2018

The project and its context

ACC is delivering a project to create and implement a model that will help identify and approve these straightforward claims for injuries which are clearly caused by accidents. The model is intended to replace some current, manual tasks with an automatic process that will produce broadly similar results

Currently all claims require some level of manual data entry into ACC systems, and manual review to determine if they should be accepted or declined, or whether additional information is required. For ACC, the current process is labour and resource intensive. This manual process often results in an unsatisfactory user experience for the client as it creates a delay in receiving a cover decision notification and accessing rehabilitation services.

ACC is improving how claims are registered, assessed and approved This will be achieved by creating a series of analytical models using de-identified historical information from the ACC45 claim form and ACC data to automate the straightforward registration cases. This automation will include models to populate the fields currently entered by registration staff members (Accident Description Models) and determine which claims qualify for auto-acceptance (Cover Decision Models), according to thresholds that are set by ACC at a similar level to the results of the current manual approval practice.

Faster claim decisions will put many clients in a better position as they start their recovery journey, produce greater consistency in the decision-making process and provide logic to help clients understand the outcomes and rationale of the cover decision process.

A Held claim will always be sent to the appropriate individual/unit for a manual cover decision. The cover decision model will never decline an ACC45 claim, only an ACC staff member will have the ability to do that.

By using automated cover decision tools for the less complex claims, it is expected that more claims can be processed and approved in a timely manner and with a greater level of consistency. This would also enable staff to focus on those claims that require the most attention and activities that provide the most benefit for customers.

1 Purpose and scope of the PIA

1.1 Purpose

The purpose of the PIA is to assess privacy impacts arising from the collection, use and storage of health information to implement ACC's new cover decision model. This model will use statistical analysis of de-identified, historical data to determine where a claim would likely have been accepted.

1.2 Scope

In Scope

This PIA assesses the impact of collection, use, storage and disclosure of health information and the automation that will be achieved through a combination of workflow enhancements in ACC's core claims management system Eos. This will be achieved through the development of three services: The Accident Description Service, the Claim Type Service and the Cover Decision Service.

The Cover Notification rules are also in scope, which will determine who can receive an automatic cover acceptance (and held cover acceptance) through email or SMS.

Out of Scope:

- Technical logic outlining how services will function
- Other enabling solutions such as API gateways
- The design of solutions, processes, roles and responsibilities

1.3 The process

This PIA was developed with assistance from the ACC Privacy Team and ACC Enterprise Architect. Inputs were also sought from internal project teams and vendors. Meetings and project document review were the primary mode of eliciting information for this PIA.

1.4 Current state

Summary: *The current cover decision process involves manually processing all claims. Information is obtained from ACC45 forms provided by providers, and used to assess whether the claim can be approved. Decisions are based on an assessment by registration workers of whether the claim meets legislative requirements for validity, and potential claim complexity is estimated. Following assessment each claim is entered into ACC's claims management system, Eos, and a letter advising the decision is sent to the claimant.*

Currently ACC receives approximately 8000 claims a day from various treatment providers throughout New Zealand. These are managed by approximately 69 staff across two sites in Dunedin and Hamilton. 92% are received via electronic channels and the remainder are received on paper forms or by other means such as fax or hand delivery.

The registration officer is required to manually match the claim to a client record, correct contact details (including addresses) perform validation checks, enter information that helps to codify the claim, repair data, identify claims that require a specialist or more intensive investigation before granting cover and make a cover decision all the while maintaining speed and accuracy Key Performance Indicators (KPIs).

Registration staff manually code the registration fields by interpreting the accident description. The codification of the claim comes down to an individual registration staff member's interpretation of the accident details to populate the relevant fields. Ambiguity in the description and the similarity of some of the codified values mean that the users often have their go-to values to populate the claim information, which creates variance between users.

Processing times vary depending on whether the claim is for a workplace accident or not. Non-work claims, when all the mandatory data is present take approximately 30 seconds to process. Work claims, by contrast, take approximately 2 minutes and 30 seconds when all the information is present. When pieces of information are missing or conflicting claims take longer to register and assess for cover.

Following the registration of the claim, if the claim requires a specialist assessment of cover, the claim is sent to another user to make the cover decision.

For those claims that have been accepted by the registration team, a calculation considers the likelihood that the client will require weekly compensation or additional rehabilitation assistance from ACC.

Of the 2.1 million claims received in the 2016-2017 financial year, 1.8 million of them were essentially one time interactions where the client went and saw a provider to seek treatment, a claim was lodged with ACC, the cover decision was made and no further intervention was required.

Approximately 160,000 claims over that period required additional information or work when assessing cover and are referred to other business units.

Approximately 5% of all claims in any given year require case management services from ACC due to the significant nature of their injuries and/ or their rehabilitation needs.

1.5 Future state

Summary: *The future state will automate approval of straightforward claims in a faster and more consistent fashion. Claims will be received as they currently are, and the system will automatically accept a claim if it meets predefined thresholds. Where the claim is accepted, a message will be sent to the claimant advising that, via SMS if that contact information is available. Claims that do not meet the auto-accept threshold will be passed on for manual review.*

Automation will be achieved through a combination of workflow enhancements in ACC's core claims management system Eos, and through the development of three services: The Accident Description Service, the Claim Type Service and the Cover Decision Service which comprises of an auto-approve model and a complexity model. There will also be a set of Cover Notification rules, which will determine who can receive an automatic cover acceptance (and held cover acceptance) through email or SMS.

The workflow and services together identify claims which require manual intervention by a Registration Officer while facilitating the movement of straightforward claims through the registration and cover assessment processes.

ACC's project to improve claims registration and approvals aims to implement a claims lodgement service that will, ultimately, result in the automated acceptance of up to 80% of claims (excluding sensitive, accidental death or other complicated claims). Held claims will always be sent to the appropriate individual/unit for a manual cover decision. The cover decision model will never decline a claim; only an ACC staff member will have the ability to do that. At initial go-live, there will be a Cover Decision 'threshold', which will be a configurable value, to determine what percentage of claims for which ACC is willing to accept automated cover decisions. This threshold can be changed. Different thresholds will produce differing false positive/negative results.

The project to which this PIA relates, focuses on:

- Lodgement/Registration – registration of claims
- Client Attribution – assign the client to the claim where possible using available data
- Employer Attribution – assign the employers to a claim where possible using the available data
- Fund Assignment – assign claims to the correct fund
- Cover Decision – Accept or Held decision on a claim
- Stream the claim – based on business rules for workflow
- Client Notification – notify the Client of the status of their claim

2 Personal and health information

Personal information is any information about an identifiable individual. In other words, it's anything which tells us something about a specific individual. The information does not need to name the individual. In some circumstances, a description of a particular injury or set of events may be sufficient to identify them, even if their name is not used.

Examples of personal information include health, accident and earnings details; age, name, address, ID numbers; opinions, assessments, emails, medical records; contracts, levy invoices, provider invoices, etc.

Health information is a subset of personal information and means any information about the health of, or health/disability services provided to, an identifiable individual as well as any information collected before, or in the course of, and incidental to the provision of a health or disability service provided to that individual. Health information is held by health agencies such as ACC and is regulated by the 12 rules of the Health Information Privacy Code 1994, a code of practice issued by the Privacy Commissioner.

Information considered in this PIA is predominantly health information as it relates to information collected by ACC in the course of providing a health or disability service. In this PIA, where that is not the case, references to health information should also be taken to refer, as necessary, to personal information.

Similarly, references to HIPC rules can be taken as referring to Privacy Act principles where appropriate. No material difference in the application of the relevant provisions has been identified.

2.1 Health information involved

No new information is collected or stored by the project from incoming Provider data.

The project as outlined in this document is intended to replace a part of the currently manual assessment process with an automatic process that will improve speed and consistency of decisions.

Accordingly, the information collected, and the purposes for which the health information is collected, used and disclosed, will be largely unchanged.

The table below lists health information that will be required to be collected and stored:

Type of health information	Source of Information	Purpose of information for the project	Data used by following Services
Accident Date	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Model
Accident Description	ACC45 form	• Communications • Cover Decision Model Input • Accident Description Model Input	• Accident Description Service • Claim Type Service

Type of health information	Source of Information	Purpose of information for the project	Data used by following Services
		• Claim Type Model Input • Data matching • Registration • Reporting	
Accident Location	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Address	ACC45 form	• Communications • Data matching • Registration • Reporting	• Mail house (cover notification letters)
Client's Date of Birth	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Client's Email	Eos Party Record	• Cover Notification	• Cover Notification Service
Client's Mobile	Eos Party Record	• Cover Notification	• Cover Notification Service
Client's Date of Death (if deceased)	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Client ID	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Date of Last Decline	ACC45 claim	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Diagnosis Codes	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service • Claim Type Service
Diagnosis Code Type	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service • Claim Type Service
Earner Status (for case complexity)	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration	• Cover Decision Service

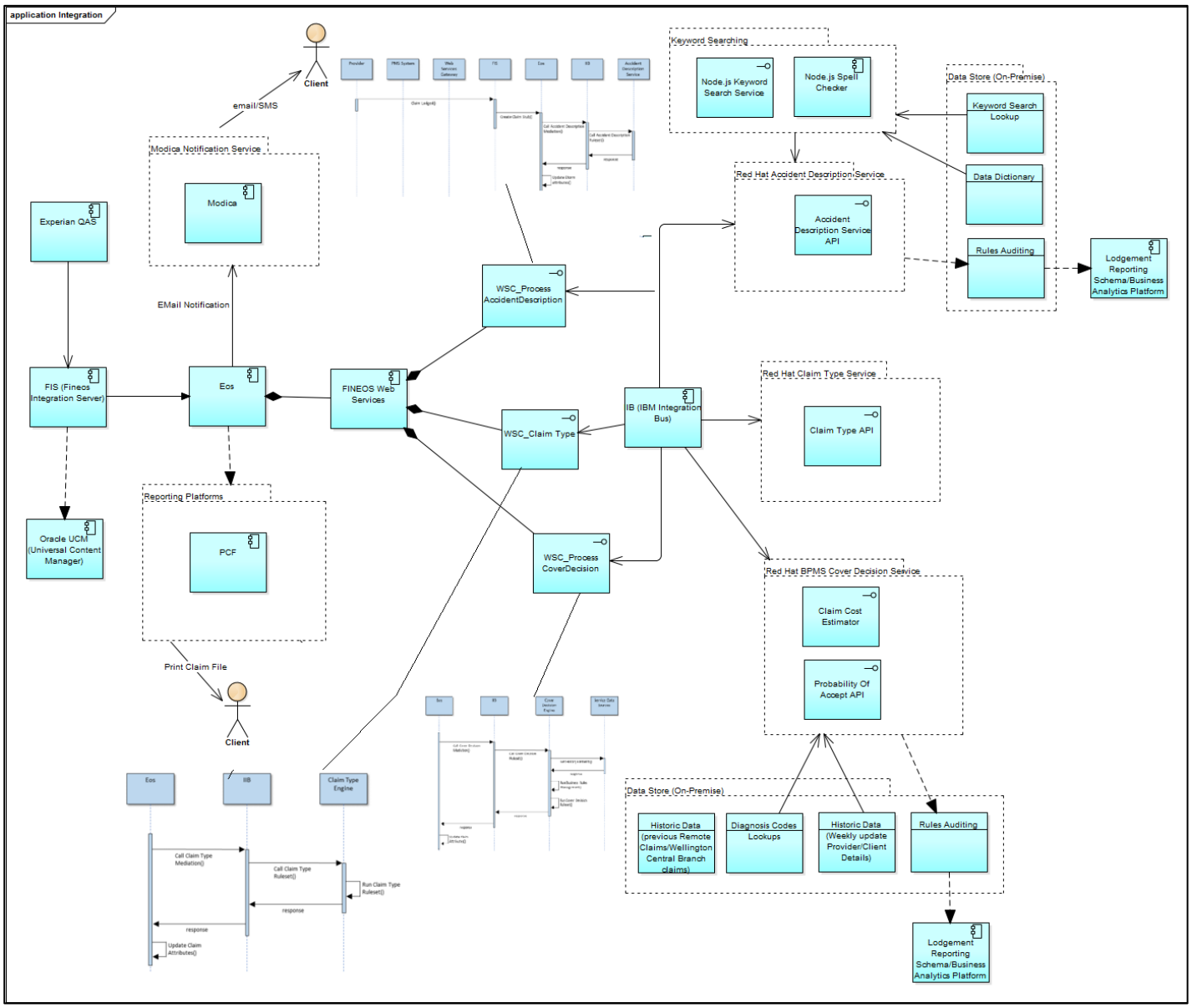
Type of health information	Source of Information	Purpose of information for the project	Data used by following Services
		• Reporting	
Incapacity (for case complexity)	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Injury Comments	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Accident Description Service • Claim Type Service
Lodgement Date	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Client Name	ACC45 form	• Communications • Data matching • Registration	
Party Indicators	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Payments History (for case complexity)	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service
Work Type (for case complexity)	ACC45 form	• Communications • Cover Decision Model Input • Data matching • Registration • Reporting	• Cover Decision Service

2.2 Information flows

Current information flow:

- **CLIENT** provides demographic and injury information to **PROVIDER**, based on stated purpose for collection "to establish cover and/or assess [client's] entitlement to compensation, rehabilitation and treatment"
- **PROVIDER** completes ACC45 form and sends to **ACC** based on authorisation provided by **CLIENT**
- **ACC** uses demographic and injury information, in conjunction with a statistical analysis of historical claims, to assess claim and process claim appropriately (e.g. approve, decline, transfer to appropriate business unit) and contact **CLIENT** and **PROVIDER** with the result of their assessment.

Future information flow is identical, except that ACC staff have part of their assessment process replaced by the automated process described in this document. The diagram below summarises the intended high level information flow between Eos and the Services in more detail, including the Cover Notification service provided by Modica on behalf of ACC.



The workflow and services together identify claims which require manual intervention by a Registration Officer while facilitating the movement of straightforward claims through the registration and cover assessment processes.

The Accident Description Service aims to auto-populate the claim registration form fields that are currently manually entered. The Accident Description models will use calculations of statistical probability, based on analysis of de-identified historical claims, to recommend inputs for auto-population. Each field provides a series of potential input values to choose from. A model for each potential input has been built, totalling over 250 individual models. These models analyse the free text within the Accident Description and Injury Comment fields from the ACC45 claim form to produce a probability for each potential input. It is recommended that the fields be populated with the input showing the highest probability. This probability threshold will be set by the business. If a field has no input with a probability that meets the threshold, then the claim will be sent for manual population.

Once the Accident Description Service has been completed, the Cover Decision Service can be called.

The cover decision process will be automated using two predictive models:

- Probability of accept (auto approve) model
- Case complexity model

These two models will work together to produce scoring for ACC to use in determining whether a claim meets their established threshold for automatic acceptance of cover.

The probability of accept model predicts how likely it is that a claim would qualify for acceptance of cover based on past decisions - it predicts organisation behaviour rather than the behaviour of the client. It utilises de-identified historical ACC claim data from 2010-2016 to analyse the probability of a claim being accepted based on variables such as injury diagnosis, client age and lodgement delay. The model delivers a probability of accept score for each diagnosis registered on the claim. This score will identify claims that are most likely to qualify for automatic approval and claims that should be held and referred for manual handling. The model will feed results of the data analysis to the rules engine, enabling automated cover decisions to be made on the bulk of the straightforward claims. This will allow decisions to be made quickly across a large volume of claims and be an input into streaming to ensure that people are getting the right services they need.

The case complexity model looks at the cost score of all claims. This model is called after the probability of accept model and the outcome can switch a claim from held to accept if the effort of investigating the claim outweighs the cost of the claim or some other threshold level determined by the business. Similar to the probability of accept model, it also utilises historical ACC claim data to assess the likely complexity of a claim and produce a complexity score per diagnosis. The complexity score is based on factors such as diagnosis, age and earner status. The model identifies high complexity claims, to assist in the rules engine determination of auto-acceptance. The complexity scoring can then also be used for injury prevention and also streaming. In addition, the case complexity could potentially identify which of the claims that are automatically referred to the complex and specialist teams are straightforward to process.

After that the claim type is verified. This is important because it will determine whether the models are able to automatically approve a claim or whether a staff member will need to handle the claim. It is also important for downstream processes such as, for example, ensuring the right cover decision letters are sent for accidental death claims.

Personal Injury Caused by Accident (PICBA) claims are straightforward claims that can be dealt with by the Cover Decision service in most cases. Specialist claims such as work related gradual process often require additional information to make a cover decision hence the need for a staff member to look at them.

Once an automatic decision has been made for 'Accept' and 'Held' claims, there are several rules run to determine whether or not to send an immediate notification to the Client via SMS. Rules preventing immediate notification include:

- duplicate claims (this rule also includes written notification)
- Clients under 16
- deceased Clients
- certain claim types, specifically Accidental Death and Sensitive claims
- where the Client is managed as part of the Remote Claims Unit or Wellington Central Branch

If there is no reason to stop the notification the cover notification will be sent to the Client via an external supplier (Modica) by sending an email from Eos.

Notification text conveys a minimum of health information as a mitigation against potential privacy issues arising from inaccurate address details. There will be separate email templates for 'Held' and 'Accept' decisions. Neither of these templates will contain any personally identifiable information in the message sent.

All notifications held can subsequently be sent manually by staff, if they deem it appropriate.

2.3 Benefits vs risks

This operational model involves automating approval of claims so people can access services to recover from injury. The model will never decline anyone cover. If the model is uncertain, it will refer the claim to a staff member who will use their expertise to make a decision.

Consequently, the risk of a person not receiving services as a result of the use of the analytics service would be low. The downside of the model referring claims to staff members is that the claim will take longer to process, however this is not a significant concern. Being selected for manual processing by the model would not materially impact on the time to receive a cover decision, as the number of claims that are ultimately declined following manual review is expected to closely match claims that would have been declined under the existing system. Time is also unlikely to be significantly different for manually reviewed claims under the new system, as most specialist teams can make a cover decision within a day providing all the data is available. People generally do not have follow up appointments the day after the first appointments, so a model that refers claims to manual processing will have little impact on client recovery.

Complex cases that are automatically held such as accidental death or treatment injury will be quickly streamed to the right teams. Essentially the model is handling the bulk of the straightforward claims and leaving staff members to deal with the more complex cases. The bulk of straightforward claims will never have human interaction so it is important for the model to correctly identify cases where cover can be automatically approved otherwise ACC could be paying for claims that are not covered within the legislation. The volume of claims that are processed by the model will be set by the business and will balance the benefits against the level or risk the organisation feels comfortable with.

A key consideration of predictive models with binary outcomes is what are the implications of false positives and false negatives? A false positive for the cover decision model would be automatically approving a claim when it should have been held. This would mean ACC is potentially accepting more

claims than it should. The complexity model accepts marginal claims that are cheaper to automatically accept than investigate. Therefore, the financial risk from false positives should be low.

False negatives are when a claim that should have been automatically approved is referred for manual handling. The impact of this is the person waits a day or so longer for their notification rather than receiving a near real time decision. The notification is a key client benefit that enables ACC to reach out to clients sooner and ensure that clients get the help they need in a timely fashion. Current processing KPIs require a decision (or for the claim to be streamed to the appropriate specialist unit) within 24 hours of ACC receiving the claim. This KPI is currently met so clients should not be materially affected by the decision to refer a claim to a staff member to determine cover.

In terms of the accident description services, incorrectly classifying the registration fields could mean that injury prevention evaluations are out as well as actuarial models for levy setting. There is currently a large amount of variation in how staff code registration fields so we expect to see consistency and improvement. Any misclassifications would be systematic and could be improved on in future model iterations.

It is expected that the model will also have to be retrained to accommodate new legislation and other changes to policy and process. The claims can be diverted to manual handling for staff to make cover decisions then the model can be retrained. Alternatively, a panel of expert staff members can determine cover and registration for historical claims that would now be eligible for cover. These claims would form test data which would have updated cover decisions and registrations fields which the model could be rebuilt off.

Thought has also been put into how staff will interact with the models. Staff will not see the probability of accept or case complexity scores. This is because they relate to the decision of auto approving cover for a claim. The decision a staff member is making about a given claim is whether it should receive cover. Statistical information from these models is not relevant for the latter decision.

Once the model is operational, a survey of how clients find the new lodgement process could also be beneficial. ACC has carried out surveys of earlier operational models such as the tool that staff use to help prioritise their workloads.

2.4 Analytics compliance with use provisions in Health Information Privacy Code (HIPC)

It is important to ensure that ACC is legally permitted to use the information for analysis as anticipated in the new model. There are two relevant uses – the first is the analysis of around 12 million records to create the model, along with subsequent analysis to test and refine it, the second is the use of information collected by providers for the purpose of lodging a claim.

The analysis of historical records involves health information and has been considered under the HIPC. Specifically, Rule 10(1)(e) of the Health Information Privacy Code permits use where the information is used for statistical purposes and is not published in a form that could reasonably be expected to identify the individual concerned. Analysis of de-identified historical records to detect trends and produce a rubric for operational use falls within this exception. Even if this were not the case, use of historical claims information to inform claims assessment appears a directly related purpose to one of ACC's stated purposes for collection, managing the Accident Compensation scheme under the Act (specifically 'providing suitable rehabilitation, treatment and compensation' and 'establish cover and/or assess entitlement to compensation, rehabilitation and treatment').

Similarly, use of information collected from providers and ACC clients to determine, by way of the new models, whether they should be accepted for cover and compensation is a core purpose of ACC and

falls within the provisions of rule 10. This is both because of client authorisation (via the ACC45 form) and because it is one of the purposes for which the information was collected.

2.5 Use of provider history information

The use of the ACC-held history of claim declines in the model raises distinct privacy issues. The data point is used in both the consideration of the likelihood of claim acceptance and the assessment of claim complexity. Where ACC has declined a significant number of claims from a specified individual provider, it is more likely that the claim will be held for manual consideration than automatically approved.

A provider's decline rate is influenced by a number of factors:

- Quality of information submitted by providers (e.g. where the person who files the claim is not the person who assessed or treated the client)
- The system the provider uses to input required information on the claim (e.g. a provider working with a Practice Management System has a greater likelihood of complete information)
- The type of injury the provider commonly treats (e.g. a physiotherapist may have greater likelihood of injuries treated receiving cover under the Act than an orthopaedic surgeon)

There is an important distinction between the number of declines associated with a given practitioner, which is information that ACC holds already (but didn't 'collect' in terms of the HIPC) and the use of that information to inform an assessment of the statistical likelihood of a given claim being approved. Holding information about the number of declines, is a natural result of operating a claim system. As ACC did not collect the information about declines directly from the providers it is not obligated by rule 3 of the HIPC to explain its purpose in doing so. Use of the information to determine the statistical likelihood of claim approval is in line with, or directly related to, the purpose for which ACC holds that information, namely to administer the ACC system and determine whether cover should be applied. ACC is obligated to ensure the information is accurate having regard to the purpose for which it is to be used, and the basis for that decision is set out in the technical report.

ACC is also subject to the access and correction provisions around the information we hold. A provider that is a person can see access to and request correction of information about him or herself, and ACC is obligated to comply with that request unless a withholding ground or other lawful excuse applies.

Provider decline data is subject to requests made under the Official Information Act and could be considered, where it relates to a decision about an individual client, to be information about that client (and therefore subject to rule 6 HIPC access requests). Disclosure of this information has the potential to be economically significant and sensitive for the providers concerned.

In order to recognise this sensitivity ACC should always consider refusing requests from clients for decline data about providers under s28(1)(b) of the PA and/or s9(2)(b)(ii) of the OIA. The provider should also be given the opportunity to provide information about the commercial sensitivity of the information in their particular circumstances.

2.6 Transparency of models

Transparency means ensuring agencies such as ACC take reasonable steps to ensure individuals are made aware of how, and why, their information is being used and disclosed. In the HIPC, transparency is enforced primarily by rules 2, 3 and 6. The Official Information Act is also relevant, giving individuals the ability to obtain information about processes and decisions that affect other people, or that affect them indirectly

- Rule 2 requires agencies to collect information directly from the individual concerned unless an exception to the rule applies, such as where compliance is not reasonably practicable.
- Rule 3 requires agencies to explain, among other things, why information is being collected, who will hold it, and whether the collection is mandatory or voluntary. The explanation should take place at the point of collection.
- Rule 6 gives individuals a legal right to obtain access to health information about them, subject to a limited set of withholding grounds (set out in sections 27-29 of the Privacy Act)
- The Official Information Act requires public sector agencies such as ACC to provide official information, on request, except where a ground exists for refusal and that ground outweighs the public benefit to disclosure.

In this case, obtaining the historical data used to develop the model directly from the individuals concerned, instead of from ACC's records of its historical decisions, is not reasonably practicable. There was therefore no legal obligation to advise those individuals of the intended use (statistical analysis) to which their health information was to be put.

Where information is not collected directly from the individual, such as where it is not reasonably practicable to do so, the 'notice' provisions of rule 3 do not apply but the access rights of rule 6 and the OIA will continue to be relevant.

Collection of information about the individual by way of the ACC45 form is subject to a 'Patient Authorisation and Declaration' which clinicians are obliged to certify that the individual has been made aware of, states that ACC collects information to 'establish cover and/or assess your entitlement to compensation, rehabilitation and treatment'. The project falls within this overall purpose.

The ACC45 statement also directs individuals to the ACC privacy statement at www.acc.co.nz/privacy. This states that ACC collects and uses health information to manage the Accident Compensation scheme under the relevant legislation, including to 'provide suitable rehabilitation, treatment and compensation'. Assessing a given claim against previous claims to determine whether it should be automatically accepted falls within this purpose.

To aid transparency, the team creating the model focused on producing models that are easy to understand and implement. Because black box models such as neural networks tend not to produce easily understandable explanations for the decisions they produce, linear regression models have been used. This approach trades off some accuracy in favour of transparency. Producing the most statistically robust models is secondary to the models being transparent.

An explanation of the model and how it works for any individual's specific data will be made available on the www.acc.co.nz website. Such an explanation will include the relevant variables, the weighting given to them, and the final assessment of complexity and claim acceptance probability.

3 Privacy assessment

The principles in the Privacy Act 1993 and rules of the HIPC provide the legal framework that ACC has to consider.

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
Rule 1 - Purpose of the collection of personal information ***Only collect personal information if you really need it.***	Rule 1 requires ACC to carefully consider the purpose for which it collects personal information. Having a clearly defined purpose makes it easier to respond to obligations under the other principles of the Act. The project will utilise data historically captured by ACC through the claims management process to build the model necessary for the automatic claim streaming process Once the project is live incoming client data will be measured against the models to automatically accept or refer to a human for decision.	No non-compliance has been identified, as purpose of the collection and collection method of personal information will not change, and ACC is continuing to only collect information necessary for lawful purposes connected with its functions and activities.	N/A
Rule 2 – Source of personal information ***Get it directly from the customer concerned wherever possible.***	Rule 2 is a statement of best practise, that ACC should collect personal information directly from the subject of the information. Information will continue to be collected through ACC's standard channels, from clients and their providers. Information used in the models is using aggregated data already available within ACC's data warehouse.	No non-compliance has been identified, as source and method of collection of health information will not change and current practices of collecting information either directly from the individual or from the individual's provider with their authorisation are compliant with rule 2.	N/A

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
	Collection of information from providers instead of directly from the client is done either with authorisation or because direct collection is not reasonably practicable.		
Rule 3 – Collection of information from subject ***Tell them what information you are collecting, what you're going to do with it, whether it's voluntary, and the consequences if they don't provide it.***	Rule 3 requires transparency between ACC and the subject of the information as to why the information is being collected, the intended recipients, whether the collection is voluntary or mandatory, and the rights of access and correction. Although the data points used for collection will not change, as the data is now going to be used by the models there will be public facing information about the models published on the ACC website, including the publication of this PIA and the technical report associated with it. ACC will take all reasonable steps to make it clear how the algorithm works, and what use it makes of client information. Information is collected subject to the statement on the ACC45 form, which is either printed on the back on the paper form or is provided to clients by clinical providers at time of collection. Providers are obligated to certify that they have ensured clients are aware of the intended use for the information collected by	No non-compliance has been identified as purpose of collection will not change and current practice is compliant with rule 3. Health information is still being collected to assess entitlements, and the intended recipient of the information is unchanged, and the ACC45, the obligation of providers to communicate relevant information to clients and the ACC privacy statement constitute reasonable steps to ensure clients are aware of how their information is being managed.	N/A

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
	the ACC45 and have provided their authority for the collection, use and disclosure of their information in line with those purposes. The ACC45 form also refers to the privacy statement on www.acc.co.nz, which states that ACC "collects information to assess entitlements to compensation, rehabilitation and medical treatment". ACC's use of historical data to assess the statistical likelihood of a claim being accepted falls within this purpose.		
Rule 4 – Manner of collection of personal information ***Be fair and not overly intrusive in how you collect the information.***	Rule 4 forbids ACC from collecting personal information by means that are unlawful, or unreasonably intrusive. This project will not change the manner of how ACC collects personal information.	No non-compliance has been identified, as manner of collection of personal information will not change and current practice is compliant with rule 4.	N/A
Rule 5 – Storage and security of personal information ***Take care of it once you've got it and protect it against loss, unauthorised access, use, modification or disclosure and other misuse.***	Rule 5 requires ACC to ensure that personal information is protected against loss, misuse or unauthorised access by adequate security safeguards. The data flows will be addressed in the project's Security Risk Assessment as part the overall security certification and accreditation process. Data will be hosted on premises. As a result, the project will ensure that it retains sole access to the data,	**Risk 1:** Change of storage location of the analytics platform. **Risk 2:** Data stores for rules not yet created. **Risk 3:** The new service does not meet ACC's Information Security Standards. **Risk 4:** Notification of accepted cover sent to incorrect email or SMS.	R1 R2 R3 R4

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
	the databases are secure and that information is encrypted in transit and at rest. Another risk arises from sending immediate notifications to clients advising them of claim acceptance or declinature. The two vectors are intended to be SMS and email. Protections for the information include ensuring that only limited information is included, e.g. not including the identity of the claimant or any details of their claim. Email will only be used where the address has been confirmed by a previous communication, meaning there is a high level of confidence that the notification will go to the person concerned. Where SMS is used, the number will be the one held on the ACC45, meaning it has not been confirmed and may be inaccurate as a result of miskeying. The mitigation for this is only providing limited information; an individual incorrectly receiving a text will not have any way of linking that text to an identifiable individual.		
Rule 6 – Access to personal information ***Customers can see their personal information if they want to.***	Rule 6 entitles individuals to access their personal information held by ACC. ACC will follow current policies to customer's request to access their personal information.	No non-compliance has been identified, as clients right to have access to their personal information on request will not change.	R7

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
	Scoring results from the models will be stored in ACC and accessible to Clients as part of their Print Claim File. Provider decline history is potentially sensitive and requests for this information by clients should be declined under section 28(1)(b) of the Privacy Act, where appropriate.	Personal information will not be passed back to Eos from the Services, but will be kept in the data store of the rules engine. **Risk 7:** Commercial damage to providers if decline percentage is revealed	
Rule 7 – Correction of personal information ***Customers have a right to seek correction of personal information about themselves.***	Rule 7 entitles individuals to seek correction to their personal information and, where the correction is not made, to attach a statement setting out the correction sought but not made. ACC will follow current policies around collection of health information. Provider decline history is potentially sensitive and consideration should be given to managing accuracy concerns by updating data held by ACC where appropriate.	No non-compliance has been identified as clients will still be able to exercise their right of correction.	N/A
Rule 8 – Accuracy etc. of personal information to be checked before use ***Make sure personal information is correct, relevant and up to date before you use it.***	Principle 8 requires ACC to ensure that information is accurate and up to date, before it's used. Information to be used in the claims streaming process is up to date as it has just been supplied to ACC. All historical data used in the models will be as up to date as possible (data feeds will be weekly or more frequently for all data points used in the models).	**Risk 5:** Potential risks associated with data entry issues at claim capture; also a current risk.	R5

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
	NHI data and Date of Death data used for identifying Clients will be updated on a more frequent basis (monthly) to ensure accuracy of Client matching.		
Rule 9 – Not to keep personal information for longer than necessary ***Get rid of it once you're done with it.***	Principle 9 requires ACC not to retain personal information longer than necessary. ACC has retention and disposal schedules authorised by the Chief Archivist in accordance with the Public Records Act. The established retention schedule will not be changed by this project. Modica has provided an undertaking to arrange, within two years, for destruction of mobile any phone numbers retained in connection with function as a service contacting ACC clients	No non-compliance has been identified.	R6 R7
Rule 10 – Limits on use of personal information ***Use it for the purpose you collected it for, unless one of the exceptions applies.***	Principle 10 restricts the use of personal information to the purpose that it was collected for. There are several exceptions to this principle, for example where ACC believes on reasonable grounds that the use is directly related to the purpose the information was obtained for and where the use is for statistical purposes and will not be published in a way that could identify the individual concerned.	**Risk 6:** Insufficient communication of how the analytics model will be utilised.	R8

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
	There will be no compliance issues in respect of this principle, as the use of health information collected by ACC to assess whether an individual's claim under the Accident Compensation Act 2001 should be granted is in line with ACCs privacy policy on www.acc.co.nz and its statements on ACC45 forms. Information historically collected from forms such as the ACC45, held by ACC and processed by way of the model will be used in accordance with client authorisation and in line with the overall purpose for which it was collected, namely to assess whether an individual's claim under the Accident Compensation Act 2001 should be granted. All historic data used from data warehouse feeds by the models is based on aggregated high level data that is de-identified using ACC internally generated identifiers (Client ID and Provider ID). It will be used in line with the purpose, or for a directly related purpose, to that for which it was collected. Use of health information for statistical purposes where the results will not be published is also permissible, and the project's analysis of de-identified data to produce statistical conclusions fits within that description.		

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
Rule 11 – Limits on disclosure of personal information ***Only disclose it if you've got a good reason, unless one of the exceptions applies.***	Principle 11 restricts the disclosure of personal information. There are several exceptions to this principle, such as where ACC believes on reasonable grounds, that the disclosure is one of the purpose about which the information was obtained, or the disclosure is to the individual concerned. Data will be primarily used internally and stored in on premise solution. The only exception is the use of a third-party provider, Modica, to send notifications of cover acceptance to individuals. Section 3(4) of the Privacy Act provides that where an agency (Modica) holds information for the sole purpose of processing the information on behalf of another agency (ACC) that information is considered to be held by the originating agency (ACC). Accordingly, the sending of notification texts can be considered a disclosure by ACC. Disclosure to the individual of the acceptance of their claim, by SMS or email, is permissible under rule 11(1)(a)(i).	No non-compliance has been identified, as limits on disclosure of personal information are unchanged and current practice is compliant with rule 11.	N/A
Rule 12 – Unique identifiers	Principle 12 prohibits ACC from assigning a unique identifier unless it is necessary for the efficient discharge of its functions.	No non-compliance has been identified. Provider ID and client ID will be used for the analytics	N/A

HIPC privacy rule	Summary of personal information involved, use and process to manage	Assessment of compliance	Link to assessment of potential risk (section 6)
Only assign unique identifiers where permitted.	ACC is also prohibited from requiring an individual to disclose any unique identifier assigned to them, unless disclosure is for one of the purpose about which the identifier was assigned. No unique identifier will be created by project; only internally generated identifiers.	model and ongoing claims management	

4 Assessment of potential risks and potential mitigations to reduce or manage adverse effects

This section describes the privacy risks you've identified through the PIA process and how you propose to mitigate and manage those risks.

Note: A PIA doesn't set out to identify and eliminate every possible privacy risk: its role is to identify genuine risks that are not unreasonably small or remote.

Assessment of current and residual risk should be **low, medium, high or very high**, based on risk likelihood *and* risk impact.

Ref. no.	Description of the risk	Consequences for ACC or customer	Existing controls that contribute to manage risks identified	Assessment of residual current risk	Recommended additional actions to reduce or mitigate risk	Residual risk remaining despite new safeguards
R1	Change of approach to reporting for Claims Lodgement – a new reporting view will be created on the current IDP RDBMS platform to enable Lodgement reporting. Within a year of go-live,	New location of the analytics platform does not meet ACC's security standards (or tactical reporting views in IDP do not conform to ACC's security standards)	Utilisation of current change processes and stage gates put in place by ACC to ensure that the new location of the analytics platform meets security standards (also applies to the interim reporting views).	Medium	Test and confirm that the new storage location of the analytics platform meets ACC's security standards and the interim reporting views	Low

	reporting data will move to the Analytics Platform bases in the Microsoft Azure cloud platform.					
R2	Data stores for rules not yet created		Utilisation of current change processes stage gates (Note: All data in data stores is non-identifiable aggregated data)	Medium	Create, test and approve data store rules before project go-live. Monitor to ensure new data stored in data stores continues to be non-identifiable aggregated data.	Low
R3	The new service does not meet ACC's Information Security Standards	The new services does not meet ACC's security standards	Utilisation of current change processes and ACC stage gates Testing of new service to ensure that it meets ACC's information Security Standards	Medium	Test and confirm that the new services meets ACC's security standards	Low
R4	Notification of accepted cover sent to incorrect email or SMS	Disclosure of information about client to third party or failure to notify	Protections for the information include ensuring that only limited information is included, e.g. not including the identity of the claimant or any details of their claim. Email will only be used where the address has been confirmed by a previous communication, meaning there is a high level of confidence that the notification will go to the person concerned. Where SMS is used, the number will be the one held on the ACC45, meaning it has not been confirmed and may be inaccurate as a result of miskeying. The mitigation for this is only providing limited information; an individual incorrectly receiving a text will not have any way	Medium	Ensure that no identifying information is in notification email/SMS messages	Low

			of linking that text to an identifiable individual. Hard copy letter will also be sent, ensuring client is notified about acceptance.			
R5	Potential risks associated with data entry issues at claim capture, but this is also a current risk	Client details not captured accurately, which may result in the incorrect being contacted	Training and internal communications Auditing/reporting Enforcement of policies and procedures	Medium	Training and internal communications Auditing/reporting Enforcement of policies and procedures	Medium
R6	Minimal communicati on of how the analytics model will be utilised.		Work in progress to determine the right level of communication required. Ensure all steps are taken to ensure ACC is open and transparent about the workings of the algorithm, including steps to demonstrate how the algorithm is used on individual's data.	Medium	Engage with ACC's Communication Team to agree and implement a communication strategy and transparency processes for access requests.	Medium
R7	Commercial damage to providers if decline percentage is revealed	Reputational damage to ACC, relationships with providers jeopardised	Section 28(1)(b) of Privacy Act can be used to decline requests for personal information where financial harm could result Internal policies around access requests	Low	Internal processes around access requests clarified, process to contact provider where release is anticipated Include information about use of provider decline information in communications to providers Ensure inaccurate information can be corrected	Low

5 Action plan

Ref	Agreed action	Who is responsible	Completion Date
1	Finalise Security Risk Assessment bases on PIA endorsement.	Craig Tweedie	30 July 2018
2	Engage with ACC's Communication Team to agree and implement a communication strategy and transparency processes for access requests.	Arran Jones	30 July 2018

Signed

Please **ensure that you either physically sign this document or insert an electronic signature.** If a signature is absent**,** the PIA will be returned to you.

Name	Role	Signature	Date
Laura McElhone	Product Owner		
Bronwen Lloyd Davies	Programme Owner		
Julene Marr	Project Manager		
Sebastian Morgan-Lynch	Privacy Officer		