Metro South Health

CAREPACT

Business Requirements Specification v0.3

Author
This Business Requirements Specification (BRS) document has been prepared by Glen Higginbotham for Evolve Health Digital on behalf of CAREPACT, Metro South Health. The content reflects the collaborative input of CAREPACT, Metro South Health, and associated partners to establish the foundation for the CAREPACT Connect system.

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1. Introduction

1.1. Context and Purpose

This Business Requirements Specification (BRS) defines the functional and non-functional requirements for a digital system intended to enhance collaboration and communication between hospital services and residential aged care facilities (RACFs). This system has a tentative title of CAREPACT Connect.

CAREPACT (Comprehensive Aged Residents Emergency and Partners in Assessment, Care and Treatment) is a multidisciplinary service within Metro South Health. It provides proactive, specialist-led acute and emergency medicine care for aged care residents to prevent unnecessary hospital transfers and improve patient outcomes. CAREPACT Connect aims to digitally transform the existing workflows of this service by addressing critical gaps in communication, interoperability, and care continuity.

By reducing administrative inefficiencies and enabling secure, real-time data-sharing, CAREPACT Connect will support clinicians in delivering higher-quality, patient-centred care. This system also aligns with broader commonwealth and state health initiatives, contributing to strategic priorities in digital health innovation, interoperability, and aged care reform.

1.2. Scope

This BRS defines the requirements for designing, developing, and implementing a digital system that facilitates secure, information exchange between CAREPACT and RACFs. The system aims to streamline workflows, ensure consistent and accurate data transfer, and improve clinical decision-making by enabling timely access to essential information for all stakeholders involved in aged care.

In addition to addressing immediate operational challenges in communication and care coordination, CAREPACT Connect will align with broader objectives of Queensland Health's digital health strategies, national digital health interoperability goals, and achieving compliance with Recommendation 66 from the Royal Commission into Aged Care Quality and Safety. Satisfying these objectives will lay the foundation for scalable, integrated care solutions for Residential Aged Care Support Services across Queensland, and Australia.

2. Objectives

2.1. Strategic Alignment

CAREPACT Connect aims to align with the broader strategic goals of Metro South Health, Queensland Health and the Australian Digital Health Agency's National Healthcare Interoperability Plan. By advancing digital health capabilities, the system will improve care coordination, reduce administrative burden, and enhance patient outcomes across Queensland's healthcare system. This alignment reflects a commitment to leveraging digital innovation to optimise healthcare delivery while fostering a connected and secure ecosystem for information sharing.

2.1.1. Metro South Health Strategic Objectives

CAREPACT Connect directly supports Metro South Health's strategic objective to "Harness digital health to improve access, insights, and results." By replacing fragmented, manual processes with an integrated digital platform, the system will streamline workflows and reduce administrative overhead, enabling clinicians to focus on delivering high-quality patient care. Key contributions include:

- **System Integration:** CAREPACT Connect will integrate with Metro South Health systems to ensure consistent and accurate data exchange.
- **Workflow Automation:** Automated processes will reduce inefficiencies, freeing clinicians to focus on direct patient care.

- **Enhanced Communication:** Digital pathways for referrals, discharge summaries, and real-time updates will strengthen coordination between stakeholders, improving patient outcomes and operational efficiency.

Figure 2.1: Metro South Strategic Objective 2024-2028: pg. 2

2.1.2. Queensland Health Digital Health 2031 Objectives

Queensland Health's Digital Health 2031 strategy identifies interoperability as a cornerstone for advancing healthcare delivery across the state. CAREPACT Connect will align with this vision by:

- **Facilitating Information Sharing:** Enabling integration with key systems such as patient administration systems, electronic medical records, and in the future, Queensland Ambulance Service.
- **Driving Operational Efficiency:** Reducing duplication and fragmentation by centralising workflows and ensuring access to real-time, accurate patient information.
- **Promoting Innovation in Care Delivery:** Offering robust telehealth functionality and streamlined digital workflows to support remote consultations and improve service delivery in diverse settings.

Figure 2.2: Queensland Health - Digital Health 2031: pg. 18

2.1.3. National Healthcare Interoperability Plan Objectives

CAREPACT Connect aligns with the Australian Digital Health Agency's National Healthcare Interoperability Plan, which envisions a secure, seamless and connected healthcare system. The system will address key priorities, including:

- **Standardisation:** Adopting HL7® FHIR® standards to enable accurate patient and provider identification, consistent clinical pathways, and meaningful data exchange.
- **Integration Across Networks:** Supporting interoperability with My Health Record, RACF clinical platforms, and other national platforms to enhance care coordination.
- **Privacy and Security:** Prioritising secure communication channels and acknowledgment of receipt, fully aligning with the Plan's emphasis on data protection and consumer rights.

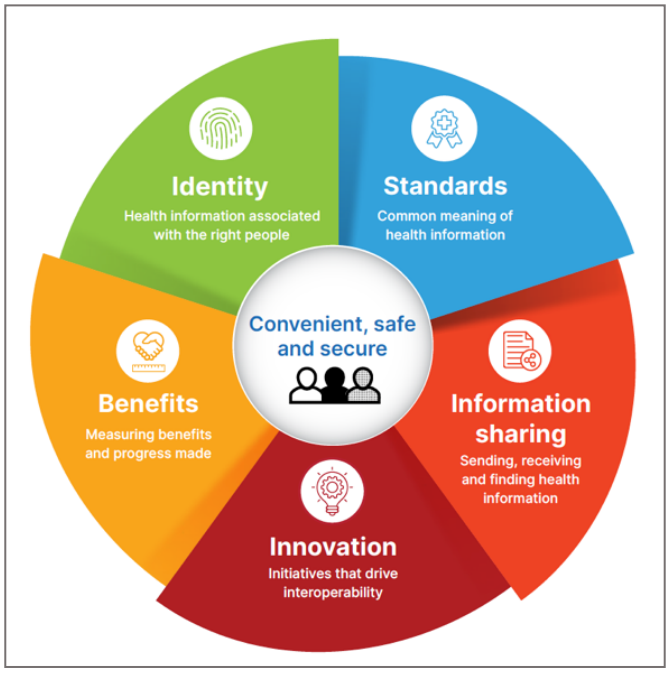

Figure 2.3: ADHA Connecting Australian Healthcare: pg. 13

2.2. Compliance with Recommendation 66

CAREPACT Connect is designed to support federal and state health departments' commitment to achieving compliance with Recommendation 66 from the Royal Commission into Aged Care Quality and Safety. This recommendation describes improving the transition between residential aged care and hospital care. By establishing protocols that enable safe and effective transitions between hospitals and RACFs, the system will ensure robust clinical handovers.

2.2.1. Primary Objectives

- **Secure Information Exchange:** CAREPEACT Connect will establish a secure, real-time digital information flow between hospitals and RACFs. This exchange will serve as the foundation for streamlined workflows, ensuring that critical patient information is transferred efficiently and accurately across the care continuum.
- **Accept Referrals from RACF:** The system will accept and manage referrals from RACFs, ensuring all transitions are effectively coordinated and critical clinical information is available for timely decision-making.
- **Real Time Discharge Information & Acknowledgement:** CAREPACT Connect will facilitate accurate and timely communication of discharge care needs and summaries. The system will support secure transmission of this information and provide mechanisms for RACFs to digitally acknowledge receipt, ensuring successful handovers.

2.2.2. Additional Objectives

- **Enable Digital Communication**: Support real-time, secure data sharing and bidirectional updates on patient status, and integration with telehealth functionality. Ensure RACF staff have access to specialist consultations and guidance, minimising unnecessary hospital transfers.
- **Streamline CAREPACT Workflows:** Provide an integrated platform that consolidates communication, data sharing, and workflow management, supporting digital discharge documentation and receipt confirmation processes.
- **Facilitate Data Sharing:** Facilitate secure exchange of clinical information to patient record systems and support data extraction for Activity-Based Funding (ABF) reporting, ensuring transparency in financial and operational metrics.

3. Business Context

3.1. Background

The current communication and coordination processes between hospitals and RACFs can contribute to delays in care, unnecessary hospital transfers, and avoidable administrative burden. These issues indicate the need for a unified system to address existing challenges.

3.1.1. Communication Gaps Between Hospitals and RACFs

Current communication processes between hospitals and RACFs rely heavily on manual methods, such as phone calls, faxes and emails, which may be inefficient, unreliable, and prone to errors. Critical information, including resident summaries, medication charts, and care plans, is often shared and documented in fragmented and time-intensive ways.

Additionally, there is currently no secure digital communication channel for data exchange in either direction between hospitals and RACFs, which further complicates the transfer of critical information. Key communication limitations include:

- **Lack of Secure Digital Communication:** There is no existing system for secure, bidirectional digital communication between hospitals and RACFs, affecting the transmission of essential documents such as discharge summaries and digital referrals. This absence of secure pathways limits the ability to effectively and securely refer aged care residents from RACFs to hospitals.
- **Outdated Strategies:** Current high-level strategic planning within the healthcare sector does not specifically address the unique communication needs between hospitals and RACFs. While some strategies mention improving communication between tertiary facilities and GPs, there is a lack of targeted initiatives aimed at enhancing direct communication with RACFs, which are responsible for coordinating resident care. This oversight results in insufficient support for effective coordination between hospitals and RACFs and primary care providers.

Reliance on manual communication methods and the lack of secure, structured communication channels lead to several operational challenges:

- Difficulty in reaching the appropriate personnel at RACFs resulting in coordination challenges
- Delays in receiving critical patient information, affecting timely care delivery
- Increased risk of errors due to transcription or miscommunication
- Repeated transfer to hospital due to failures of clinical handover

3.1.2. Lack of Data Interoperability

Metro South Health systems and the various clinical information systems used by RACFs currently operate in isolated environments with limited data-sharing capabilities. This lack of interoperability restricts the efficient exchange of essential patient data, creating barriers to timely and secure information sharing between hospitals and RACFs.

Additionally, there is no accurate identifier within Queensland Health IT systems to confirm that a patient resides in an RACF, which further complicates data tracking and continuity of care. While HBCIS includes an "address type" field intended for patient address classification, this field is often incorrect or inconsistently maintained.

Key issues resulting from these interoperability and identification limitations include:

- Repetitive data entry and redundant requests for information
- Time spent on manual data transfer and reconciliation efforts
- Increased likelihood of errors due to manual data handling processes
- Difficulty tracking patient care continuity across hospital and RACF settings

3.1.3. Technology Hindering Optimal Resource Allocation

The current system setup can sometimes lead to hospital transfers for RACF residents that could be avoidable, despite the dedicated efforts of the CAREPACT team to minimise unnecessary hospitalisations. Limitations in the existing technology and system infrastructure are preventing CAREPACT from maximising their effectiveness in managing care for RACF patients. Technology constraints create inefficiencies and may result in hospital transfers that could potentially be avoided with more integrated and supportive tools.

Avoiding unnecessary transfers not only benefits RACF residents by reducing potential stress and transfer-related risks, but also helps to release capacity within the healthcare system, making resources more readily available for all Queenslanders with urgent needs.

3.2. Broader Impact

The implementation of CAREPACT Connect will establish a scalable framework for broader application across Queensland. By introducing a unified and adaptable digital platform, other Hospital and Health Services (HHSs) can enhance their Residential Aged Care Support Services (RASS).

RASS programs across Queensland share a similar scope and objective: to provide specialist-led care within RACFs, reducing unnecessary hospital transfers and ensuring high-quality, patient-centred care. A scalable CAREPACT Connect system would enable these services to adopt a consistent platform, supporting care coordination and offering additional alternatives to Emergency Department care. The broader impacts of leveraging this framework are:

- **Statewide Alignment:** Creating a unified platform that integrates across HHSs facilitates better communication, shared resources, and consistent care standards.
- **Improved ED Diversion:** Expanding access to digital workflows and integrated clinical pathways would empower RASS programs to deliver specialist care directly within RACFs, reducing reliance on hospital-based services.
- **Streamlined Integration:** By adhering to standardised interoperability frameworks (e.g., HL7® FHIR®), the system can support statewide expansion without compromising flexibility or customisation for local needs.

Scalability will not only enhance the operational effectiveness of existing RASS programs but also foster a more connected and efficient healthcare ecosystem across Queensland.

3.3. Current Environment

The current system environment and workflows within CAREPACT and RACFs are fragmented and rely heavily on manual processes. This arrangement contributes to communication gaps and data interoperability issues, which impact the quality and efficiency of patient care and healthcare service delivery. The table below shows the current systems or technologies in place, the use or limitation of those systems, and the implications they are having as described in Section 2.

Metro South Health

System/Technology	Current Use/Limitations	Implication for Workflow
Data Capture & Storage	Data capture managed across multiple Microsoft 365 tools (e.g., SharePoint, Teams, Power Automate) without a unified platform.	Fragmented data storage requires staff to access multiple systems, adding complexity and time to workflows.
HBCIS (Patient Administration System)	No integration with CAREPACT's systems; patient data must be manually entered and cross-referenced with RACF-provided demographics.	Manual data entry increases administrative workload and risk of data entry errors.
Cerner PowerChart (electronic medical record)	No direct integration with CAREPACT's workflow tools; manual reconciliation of records needed for patient transitions.	Patient records and assessments are handled in isolated environments, delaying care coordination.
Enterprise Discharge Summary Transmission	Discharge summaries often printed, faxed, or batch-uploaded to Health Provider Portal, The Viewer, and My Health Record. GPs have access to electronic transmission of discharge summaries.	Reliance on batch uploads causes delays (2–3 days), impacting access to timely discharge information.
Telehealth Communication Tools	Various third-party apps, including Microsoft Teams, FaceTime, WhatsApp, and "store-and-forward" solutions, for virtual consultations with RACFs. There is currently no fit-for-purpose telehealth platform to support efficient and accessible virtual consultations for RACFs and CAREPACT clinicians.	Lack of a standardised, fit-for-purpose telehealth platform requires CAREPACT staff to rely on non-QH, non-integrated, ad hoc tools, which complicates communication, creates delays, and impacts the quality of urgent patient care coordination while also not adhering to QH security standards.

Table 3.1: Current Metro South Digital Environment

Residential Aged Care Facilities

System/Technology	Current Use/Limitations	Implication for Workflow
Client Information Systems	Multiple systems in use across RACFs (e.g., Telstra Health, Autumn Care, Lee Care) with no standardised or unified platform.	Fragmented system landscape complicates data exchange with CAREPACT and limits data standardisation.
Yellow Envelope Project	A yellow paper envelope with checklist on front is used by RACF. RACF staff print the Resident Summary and Medication Chart and insert them into the envelope. This is handed to the paramedic to bring to hospital. Variable quality of information is contained within.	Manually printing and assembling physical records is significantly time consuming. Paper copies of records are often over 30 pages in length. The information is not curated for audience.
Interoperability with CAREPACT	No integration between RACF systems and CAREPACT's platform, requiring manual data sharing through phone, fax, or email.	Manual transfer of patient info (medication charts, summaries) is time-consuming and prone to errors.
Communication with Metro South Health	No secure digital channel for sharing real-time updates or referrals.	Patient information shared manually, leading to delays in care coordination, or through unsecured, third-party applications.
Discharge Summary Receipt	RACFs receive discharge summaries via multiple formats but lack a consistent process to confirm receipt or review.	Lack of acknowledgment can lead to missed or delayed follow-ups on patient care after hospital discharge.
Telehealth Communication Tools	RACF staff use various communication tools to connect with emergency clinicians for virtual consultations. Previous telehealth tools, with links sent to the RACFs by CAREPACT, were complicated and unreliable.	The absence of a robust telehealth solution limits RACF staff's ability to receive support in emergencies, resulting in reliance on multiple non-integrated ad-hoc platforms.

Table 3.2: Current RACF Digital Environment

4. High Level Use Cases

This section outlines the use cases that define how CAREPACT Connect will enhance operational workflows and improve care coordination between hospitals and RACFs. These use cases highlight primary functionalities such as referral management, care coordination, and clinical documentation, which the system will enable in a streamlined and efficient manner.

To provide a clear understanding of the envisioned workflows, a high-level process flow is included below. This flow illustrates the end-to-end interaction between RACFs, CAREPACT staff, and supporting systems, showcasing how CAREPACT Connect will facilitate key activities and meet its objectives. While this section focuses on essential workflows, it lays the foundation for further refinement and detailed implementation.

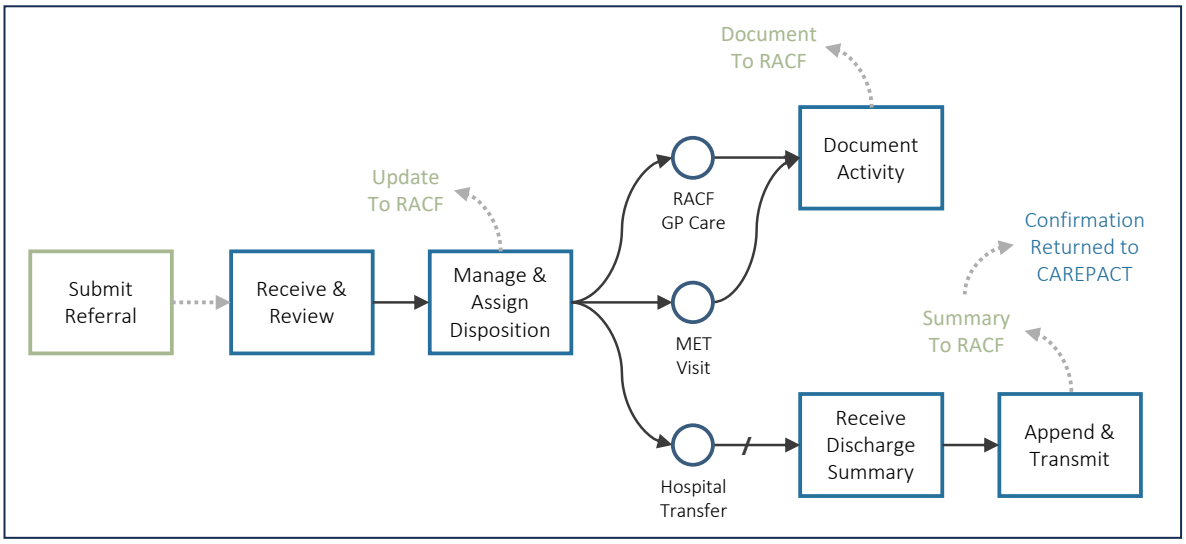

Figure 4.1: High-Level Workflow

4.1. Submit a Referral to CAREPACT from RACF System

This use case allows RACF clinicians to submit a digital referral to CAREPACT, providing essential patient details, clinical concerns, and the reason for the referral. While the development of this functionality within the RACF system is out of scope for CAREPACT Connect, it is vital to acknowledge that this process serves as the starting point for all subsequent care coordination activities. Accurate and timely referrals are essential to ensure that CAREPACT can triage effectively and deliver the appropriate level of care.

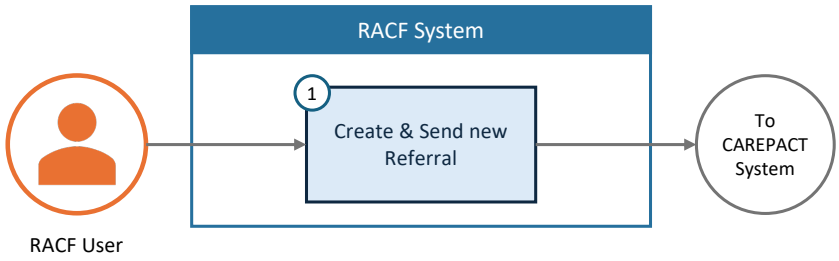

Figure 4.1: Submit a Referral to CAREPACT

1 The RACF clinician identifies a resident requiring coordinated care and initiates the referral process within their system. The system allows inclusion of all necessary patient details in the referral, and RACF staff can add missing information if not already available.

If the RACF system lacks the functionality to create and submit referrals digitally, a plug-in or intermediary solution may be required to enable secure submission to CAREPACT Connect.

Once all required fields are completed, the referral is submitted digitally through secure transfer, with the system confirming successful submission to ensure transparency and accountability.

4.2. Receive & Review New Referral

CAREPACT staff review referrals to verify completeness and assess the urgency of the case. If necessary, they contact the RACF to request additional information or clarify details to ensure accurate triage.

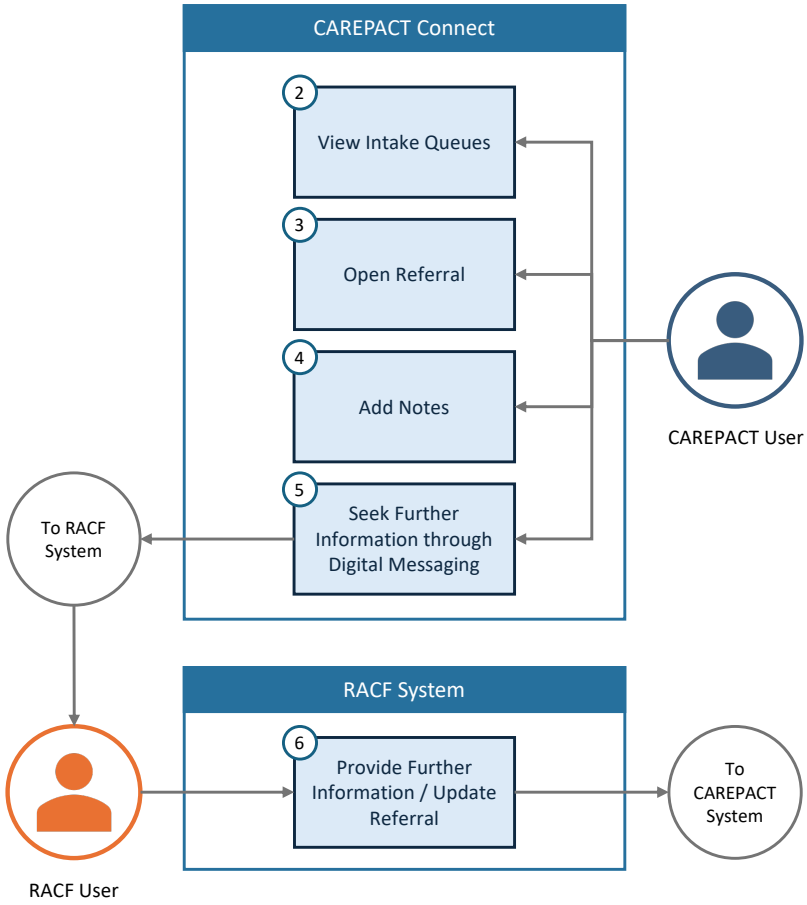

Figure 4.2: Submit a Referral to CAREPACT

2 The CAREPACT User logs into the system and accesses the intake queue, which serves as a centralised location for all newly submitted referrals. The queue provides an overview of pending referrals. This streamlined interface ensures that CAREPACT staff can efficiently manage incoming referrals and quickly identify cases requiring immediate attention.

3 The CAREPACT User opens a referral to review its details. Typically, this task will be performed by an admin or nursing staff member, who verifies the completeness of the information provided. The user assesses whether the referral contains sufficient information to proceed with triage or if further clarification is required.

4 After reviewing the referral, the CAREPACT user may add notes to document initial clinical observations, or administrative updates. These notes are documented directly into the referral record within the system, ensuring that all relevant information is centrally stored and easily accessible to other CAREPACT users.

5 If information is missing from the referral, the CAREPACT User can initiate a digital message to the RACF through CAREPACT Connect. This secure messaging functionality allows the user to request specific details. This communication ensures timely updates and accurate information exchange.

Note: this communication may still occur via phone or e-mail as not all RACFs will have the functionality within their system to send or receive digital messages. In these instances, the CAREPACT user should add a note to the referral record.

6 Upon receiving a request for additional information, RACF staff review the request and provide the necessary updates to the referral. This may involve adding missing details

directly into the system. Once the additional information is submitted, the referral is updated in real time, ensuring CAREPACT staff have access to the most current and comprehensive data to proceed with triage.

4.3. Manage Referral & Assign Disposition

CAREPACT users manage referrals and assign dispositions to determine the appropriate course of action for RACF residents. By updating referral statuses, organising workflows through queues, and documenting decisions, CAREPACT staff ensure efficient coordination and transparent communication with all stakeholders involved in the resident's care.

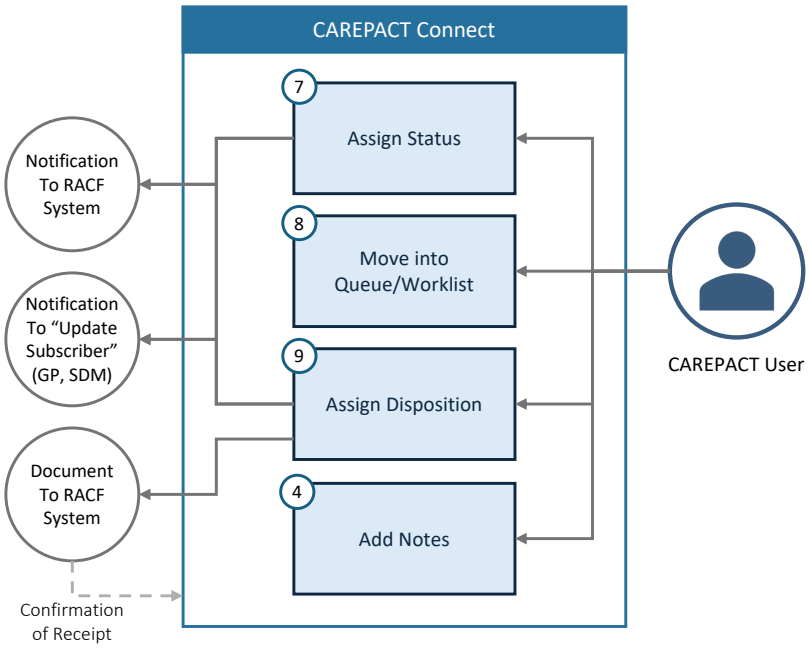

Figure 4.3: Manage Referral

7 The CAREPACT User updates its status to reflect its current stage in the workflow (e.g., "Admin Reviewed" or "Ready for Triage"). This status update helps streamline operations by ensuring that all team members can quickly identify the progress of each referral. Assigning a status may also automatically move the referral to the next queue (e.g., "To Triage")

8 The CAREPACT User may move a referral into the appropriate queue or worklist for further action. Queues are organised to align with CAREPACT's workflows, enabling efficient management and prioritisation.

9 A CAREPACT clinician reviews the referral details and assigns a disposition that determines the next steps in care. Dispositions may include actions such as continuing care in the RACF under GP supervision, deploying the Mobile Emergency Team (MET), or arranging a hospital transfer.

4 Throughout the referral review and disposition process, the CAREPACT User can document relevant observations, decisions, and communications in the referral record as per previous use cases.

Assigning a status or disposition can trigger automated updates to the referring RACF system and other subscribed parties (e.g., the resident's GP, family, or substitute decision-makers), ensuring all parties are informed of the care plan. System actions like this could also trigger system functionality like setting a reminder for a nurse review in 72 hours.

4.4. Document CAREPACT Activity (MET, Support Call, In reach, etc)

CAREPACT team members document all activities associated with a referral to ensure a complete and accurate record of care. CAREPACT staff may use pre-constructed forms for consistency, which can then be attached to the relevant referral record. Upon completing the documentation, the system may automatically send these records to the referring RACF for confirmation of receipt.

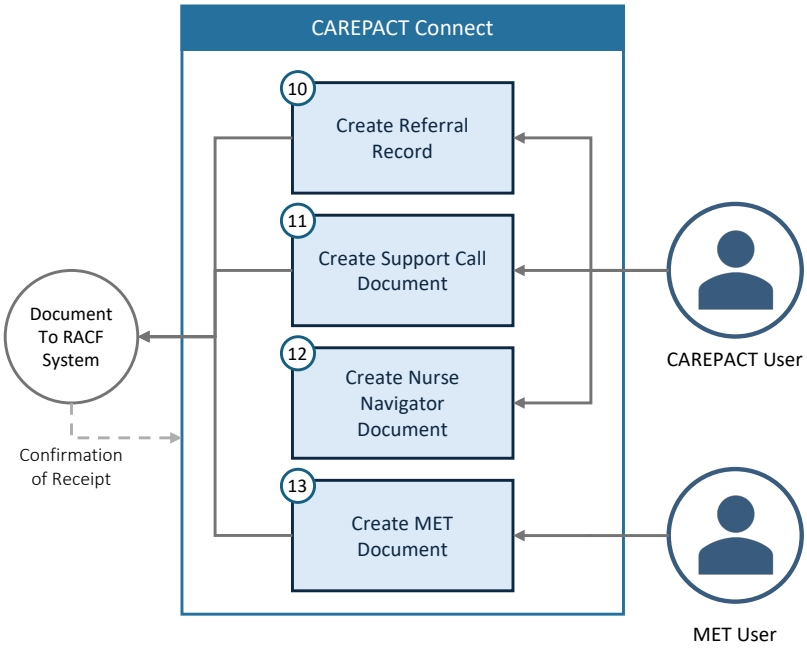

Figure 4.4: Document Activity

10 When a referral is received via a phone call, a CAREPACT staff member creates a new referral record directly in the system. The staff member inputs all necessary information. This process ensures that every request for CAREPACT support, regardless of its source, is properly documented and tracked. Once created, RACF-provided documentation or material can be attached, and the referral can be managed like any other within the system.

11 CAREPACT staff document support line calls by completing a form that captures the details of the call. The completed document is attached to the associated referral record (if applicable) or stored as a standalone entry if no referral exists. After completion, the document can be sent to the RACF for their records.

12 A Nurse Navigator document is created to record details of in-reach coordination efforts or specific nursing activities related to the resident's care. The document is linked to the relevant referral (if applicable). Upon finalisation, the system may automatically send the document to the RACF system, with receipt confirmation logged.

13 When the MET is deployed to assist a resident, CAREPACT staff create a MET document to record the intervention. The MET document is attached to the referral record to maintain a comprehensive history of the case. Once completed, it is automatically sent to the RACF.

Note: CAREPACT has a verified email directory for all RACFs within Metro South, which will be used for documents requiring email delivery. CAREPACT Connect should maintain RACF profiles with this data. This functionality would allow CAREPACT staff to easily identify the appropriate method for document distribution and streamline the process for both manual and automated document transfers. For noting in data or integration requirements below.

4.5. Send Discharge Summary

CAREPACT staff ensure timely and accurate communication of discharge information to RACFs. The discharge summary process is designed to maintain continuity of care by securely and efficiently delivering vital patient information. CAREPACT Connect facilitates this by enabling staff to review, enhance, and send discharge summaries, ensuring that RACFs receive updates about their residents' care. The system supports multiple delivery methods, adapting to the integration status of each RACF while maintaining confirmation of receipt to close the communication loop.

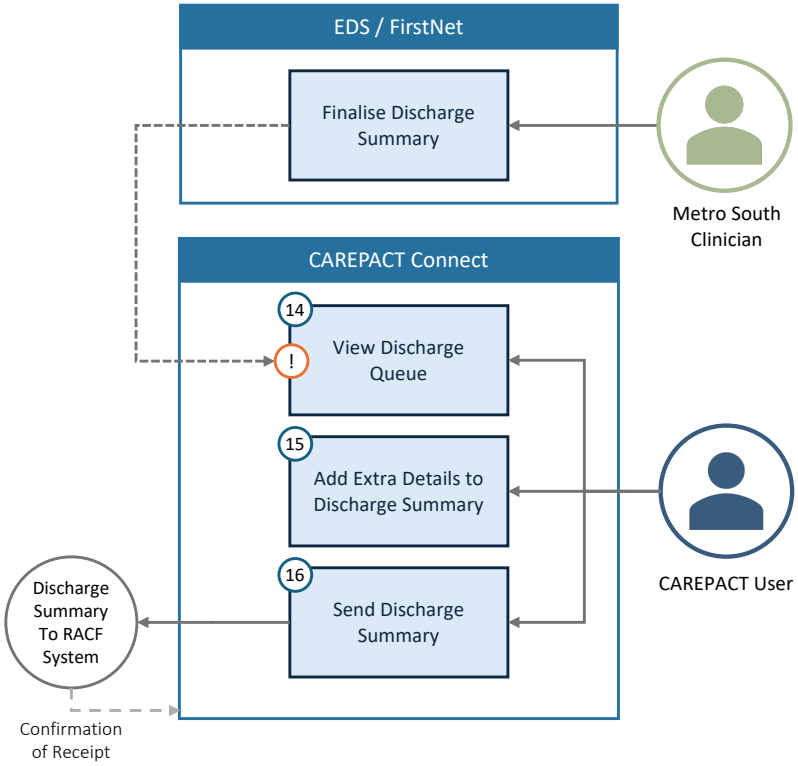

Figure 4.5: Send Discharge Summary

14 ! When a discharge summary is completed, it is sent to CAREPACT Connect and added to the Discharge Queue. CAREPACT Connect generates an alert to notify staff that a new discharge summary requires attention. The queue serves as a centralised location for all pending discharge summaries, enabling CAREPACT staff to quickly identify and prioritise cases.

15 CAREPACT staff can review and enhance the discharge summary received in CAREPACT Connect. This may include adding specific notes or observations about the patient's care or any additional information requested by the RACF. All additions made to the discharge summary are logged within the system to maintain an accurate record.

16 Once finalised, the discharge summary is sent to the RACF via CAREPACT Connect. If the RACF has integrated with CAREPACT Connect, the summary is transmitted directly through the system, ensuring secure and efficient delivery.

For RACFs without digital integration, CAREPACT staff can send the summary via email, with the recipient details recorded for tracking purposes.

CAREPACT Connect records confirmation of receipt from the RACF, ensuring that the handover process is complete and fully documented.

5. Stakeholder Requirements

The desired future state for CAREPACT Connect envisions a digitally integrated, patient-centred system designed to address the current challenges and meet the evolving needs of the aged care sector within Metro South Health and beyond. This vision builds upon the objectives outlined in Section 1.3, translating them into actionable stakeholder requirements.

5.1. Key Elements of the Future Environment

Data Exchange: Facilitate secure, interoperable data exchange between CAREPACT Connect and the diverse clinical information systems used by RACFs. This will enable real-time exchange of essential patient information and discharge summaries, ensuring comprehensive data availability for all care providers.

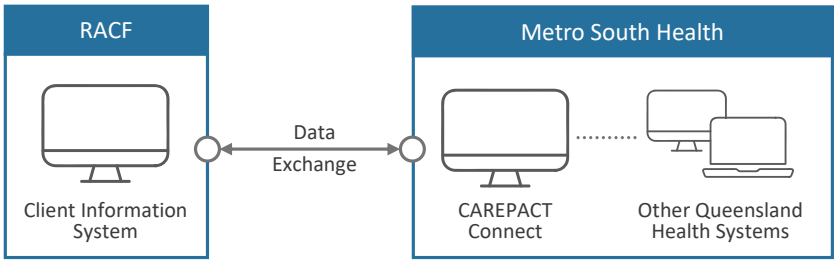

Figure 5.1: Secure Data Pipeline

Clinical Handover: Enable the secure and timely transfer of discharge summaries from Queensland Health to RACF clinical information systems to ensure continuity of care. CAREPACT Connect patients' discharge summaries may come from the Emergency Department via Cerner FirstNet, or from hospital wards via Enterprise Discharge Summary (EDS). These summaries will be sent to CAREPACT Connect where additional information can be provided by CAREPACT staff, and then sent to the patient's RACF. This process will conclude by an automated digital receipt being sent back, ensuring that RACF systems confirm receipt of discharge information.

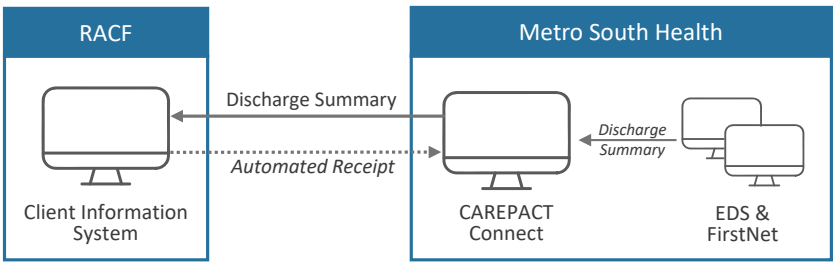

Figure 5.2: Discharge Summary Transmission

Standardised Data Capture and Documentation: Support standardised methods for documenting each stage of the patient journey, enabling consistent and complete data capture across all interactions from the initial RACF request through triage, patient arrival, care provided during MET deployments, and discharge. This system will enable consistent documentation across all interactions, allowing clinicians to capture essential data even while outside a QH facility.

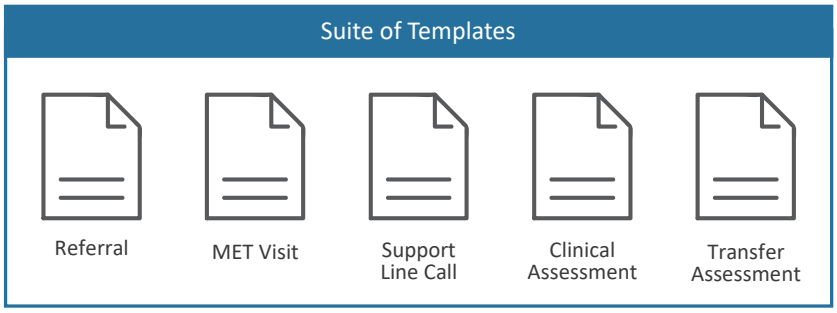

Figure 5.3: Example Suite of Document Templates

CAREPACT Referral Management: Enable efficient referral management by providing tools to update referral statuses, organise workflows, and determine appropriate dispositions based on care needs. The system will ensure that all referral activities, including requests for additional information, triage decisions, and care coordination, are logged and tracked in real-time. By centralising referral management within a single platform, CAREPACT Connect will enhance transparency, reduce manual effort, and ensure that every referral is processed efficiently and accurately.

Real-Time Digital Communication: Enable secure, real-time digital communication between CAREPACT staff and RACF staff through features such as secure messaging, alerts, and notifications. This functionality will facilitate timely updates and coordination, enhancing responsiveness to patient needs.

Primary Care Provider Updates: Ensure that the resident's primary care provider (typically their GP) receives timely updates at each stage of the resident's journey when referred to CAREPACT. This process will include automatic notifications or summaries of key events, keeping the primary care provider informed and aligned with the care plan. By integrating primary care providers into the communication flow, CAREPACT can enhance coordination and continuity of care, supporting seamless transitions and informed decision-making.

Resident, Family & Substitute Decision Maker Communications: Ensure that the resident, along with their nominated family members and substitute decision makers (SDMs), such as Enduring Power of Attorney or Statutory Attorney, are kept informed at each stage of the CAREPACT journey. This process will include timely updates on assessments, care decisions, and discharge plans, provided through preferred communication methods. Through this, CAREPACT can ensure transparency, support informed consent, and foster trust in the continuity and quality of care provided.

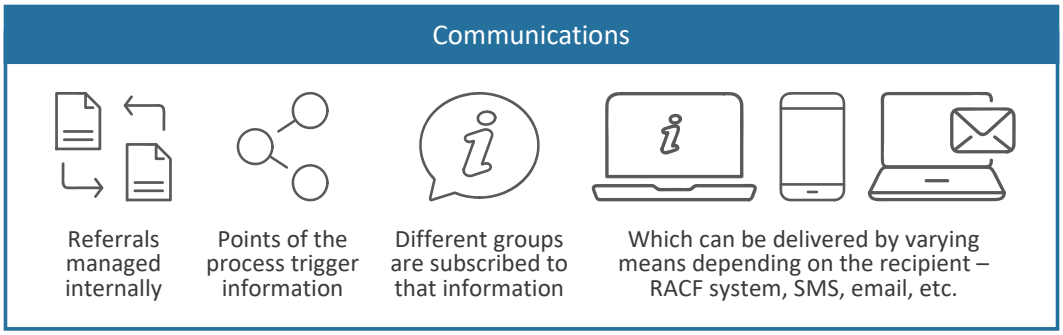

Figure 4.5: Activities in CAREPACT Connect Trigger Notifications

Centralised Reporting: Develop a centralised reporting system that draws from the comprehensive data repository within CAREPACT, aggregating all documented information—such as patient records, RACF requests, communication logs, and clinical handover data. This unified data source will allow for data extraction and analysis, enabling CAREPACT staff to generate real-time reports for strategic planning, operational insights, and compliance with activity-based funding requirements.

5.2. Beyond Metro South Health

The design of CAREPACT Connect, while focused on the needs of Metro South Health, is intended to support a scalable, adaptable solution that aligns with national goals for aged care reform.

This system should be developed with consideration for establishing a model that can be expanded across other Hospital and Health Services (HHSs) in Queensland and nationally, contributing to improvements in aged care services across Australia.

The following design considerations will support this broader applicability.

RACF System Integration

The system will be designed to integrate with a wide range of clinical information systems used by RACFs by adhering to (at minimum) HL7® FHIR® Release 5. CAREPACT Connect will leverage these capabilities to facilitate bidirectional integration with any FHIR® capable RACF clinical information system. This allows for system agnostic expansion of CAREPACT Connect beyond Metro South Health.

Department of Health (Commonwealth) System Integration

To ensure interoperability across the Australian healthcare ecosystem, CAREPACT Connect will be designed to adhere to Australian Digital Health Agency (ADHA) standards. This will allow for integration with Commonwealth systems including My Health Record, and any future systems that meet the capabilities of HL7® FHIR® Release 5 or equivalent standards. This integration will provide a consistent and secure framework for sharing critical patient information across healthcare providers, ensuring continuity of care and compliance with national health policies.

Localisation

CAREPACT Connect should consider localisation features to address the unique needs of diverse user groups and regions across Queensland and Australia. This will enable the system to adapt to regional differences in healthcare services, terminology, and operational workflows. Localisation efforts will also support the inclusion of culturally appropriate features to better serve diverse communities and meet the specific requirements of providers across urban, rural, and remote areas.

Modular Design

A modular approach enables regions to customise their use of the system, whether for telehealth, data capture, communication, or other functions, without requiring a complete system implementation. By offering flexibility, the modular design ensures that the system can adapt to different workflows, models of care, and technological environments

Adaptability

The system will maintain compatibility with varying models of care and governance structures, making it adaptable to the unique needs and operational frameworks of different health care services.

Scalability

The system will be scalable, capable of accommodating growth in both scope and volume as additional regions and facilities adopt its framework. By leveraging cloud-based infrastructure, the system will maintain resilience and performance, ensuring reliable access and operation even during peak usage or in geographically dispersed locations.

6. Functional & Non-Functional Requirements

This section provides detailed requirements for CAREPACT Connect, focusing on the specific capabilities necessary to achieve the system's objectives. Each requirement is expressed as a clear, statement to guide the design and development phases. These requirements build upon the high-level stakeholder needs outlined in the previous section, translating them into directives for system functionality.

Priorities

Each requirement has been assigned a priority level to reflect its importance in achieving the objectives of CAREPACT Connect. These priorities guide the development process, ensuring critical functionalities are implemented as a priority while less essential features are addressed as resources allow:

- **Mandatory:** Essential requirements that the system must include to meet its core objectives and comply with regulations. Without these, the system cannot function as intended.
- **Should Have**: Important requirements that enhance the system's efficiency and usability. While not critical, their inclusion will improve user experience and operational effectiveness.
- **Nice to Have:** Optional features that add value or improve usability but are not necessary for the system's core functionality. These may be implemented if time and resources permit.

6.1. Functional Requirements

These requirements describe the system's core capabilities and how they support the workflows, processes, and interactions required by stakeholders.

Referral Management

ID	Description	Priority
FR001	The solution shall allow RACF staff to submit digital referrals through a secure FHIR® interface.	Mandatory
FR002	The solution shall allow CAREPACT staff to create a new referral record if a referral is received via phone or other non-digital means.	Mandatory
FR003	The solution shall provide a mechanism for CAREPACT staff to view and manage incoming referrals.	Mandatory
FR004	The solution shall allow CAREPACT staff to update referral statuses.	Mandatory
FR005	The solution shall support the organisation and management of referrals based on their status.	Mandatory
FR006	The solution shall enable CAREPACT staff to assign dispositions (e.g., "RACF GP Care," "MET Deployment," "Hospital Transfer").	Mandatory
FR007	The solution shall support the notification of RACF systems and other stakeholders of referral status changes or assigned dispositions.	Mandatory
FR008	The solution shall provide CAREPACT staff with advanced search and filtering options to locate referrals based on patient details, status, date received, etc.	Mandatory
FR009	The solution should support prioritisation of referrals, allowing CAREPACT staff to flag or rank cases based on urgency.	Should Have
FR010	The solution should allow CAREPACT staff to define conditional logic (e.g., if X condition is met, assign referral to Y queue).	Should Have
FR011	The solution should allow CAREPACT users to assign specific tasks related to referrals (e.g., follow-up calls, triage reviews) to individual staff members.	Should Have

Documentation & Forms

FR012	The solution shall allow users to add free-text notes to referral records, including notes from phone communications.	Mandatory

FR013	The solution shall support configurable templates for documenting specific CAREPACT activities (e.g., MET visits, Nurse Navigator interactions, Support Line Calls).	Mandatory
FR014	The solution shall attach completed activity documents to the relevant referral record.	Mandatory
FR015	The solution shall automatically send completed activity documents to RACF systems.	Mandatory
FR016	The solution shall be capable of receiving an acknowledgment of receipt from RACF systems.	Mandatory

Communication and Messaging

FR017	The solution shall support secure, bidirectional digital messaging between CAREPACT and RACFs.	Mandatory
FR018	The solution shall allow CAREPACT staff to request additional information from RACFs via digital messaging.	Mandatory
FR019	The solution shall notify RACF systems when additional information is requested and allow RACFs to update referral records in response.	Mandatory
FR020	The solution shall send automated updates to "subscribers" (e.g., GPs, families, decision-makers) at key stages of the referral process.	Mandatory
FR021	The solution shall allow CAREPACT staff to specify preferred communication channels (e.g., email or direct system interface) for each RACF.	Mandatory
FR022	The solution shall allow users to log all communication events, including phone calls, digital messages, and document exchanges, within the referral record.	Mandatory

Notifications and Alerts

FR023	The solution shall generate automatic notifications to RACFs when a referral reaches stages of review/activity (e.g., received, reviewed, triaged).	Mandatory
FR024	The solution shall provide alerts to CAREPACT staff when new referrals are submitted or require immediate attention.	Mandatory
FR025	The solution shall provide options to manage notification settings for different workflow events.	Mandatory

Discharge Summary

FR026	The solution shall allow CAREPACT staff to review and provide additional notes on discharge summaries before transmission.	Mandatory
FR027	The solution shall support the transmission of discharge summaries via multiple methods, including secure email and via the FHIR® interface.	Mandatory

Telehealth and Remote Collaboration

FR028	The solution shall enable CAREPACT clinicians to conduct virtual consultations with RACFs.	Mandatory
FR029	The solution shall support the recording of telehealth session notes and their association with referral records.	Mandatory

Data and Reporting

FR030	The solution shall support data extraction and generate real-time reports to facilitate operational insights (e.g. response times, outcomes), care coordination, and telehealth utilisation, etc.	Mandatory
FR031	The solution shall enable data extraction to support reporting requirements, including Activity-Based Funding (ABF).	Mandatory

FR032	The solution shall enable data extraction to support reporting requirements that specifically relate to compliance monitoring (e.g., Recommendation 66 adherence).	Mandatory
FR033	The solution shall generate audit trail reports detailing all system interactions for compliance and governance purposes.	Mandatory
FR034	The solution shall support the bulk import of historical referral data, activity records, and patient information into the system prior to go-live.	Mandatory
FR035	The solution should ensure that imported historical data is integrated referral records, and reporting capabilities within the system.	Should Have
FR036	The solution should validate imported data against system data standards, ensuring compliance with field formats, data types, and mandatory fields.	Should Have

6.2. Non-Functional Requirements

These requirements focus on ensuring the system operates efficiently and effectively under various conditions while meeting user expectations. As they define critical aspects of performance, security, and compliance, all non-functional requirements are mandatory to ensure the system's reliability, usability, and alignment with organisational and regulatory standards.

6.2.1. Data Requirements

This section details the data that CAREPACT Connect must capture, store, process, and exchange.

ID	Category	Description
NFR001	Inputs & Outputs	The solution shall allow RACF staff to upload supporting documents in widely used formats (e.g., PDF, DOCX, JPG, PNG) to facilitate information sharing.
NFR002	Forms & Standards	The solution shall comply with HL7® FHIR® Release 5 standards for data exchanges.
NFR003	Validation	The solution shall validate mandatory fields to ensure completeness before referral submission.
NFR004		The solution shall validate data formats for key fields (e.g., numeric Medicare numbers, date of birth fields) to ensure accuracy.
NFR005		The solution shall include functionality to detect and prevent duplication of patient and referral records.
NFR006	Storage & Retention	The solution shall store data securely in compliance with applicable legal frameworks, including the Public Records Act 2002 (Qld).
NFR007		The solution shall store data on servers located within Australia to comply with the Information Privacy Act 2009 (Qld).

6.2.2. Interface Requirements

This section describes the interfaces required to enable communication between CAREPACT Connect and other Queensland Health systems, and external systems, such as RACF clinical platforms and federal health systems.

ID	Category	Description
NFR008	Integration and Interoperability	The solution shall integrate with a variety of RACF client information systems using at least HL7® FHIR® Release 5 standard.
NFR009		The solution shall enable real-time, bidirectional data exchange with RACF systems to support referrals, patient records, and activity documentation.
NFR010		The solution shall facilitate integration with systems where patient discharge summaries are created (i.e. Cerner FirstNet and Enterprise

		Discharge Summary) to enable distribution of appended discharge summaries to RACF via CAREPACT Connect.
NFR011		The solution shall support interoperability with Queensland Health systems (e.g., HBCIS, Cerner PowerChart) for accessing hospital records and patient information.
NFR012	System Interfaces	The solution shall support integration with external systems via APIs conforming to industry-standard protocols (e.g., REST, SOAP) and data exchange formats (e.g., JSON, XML).
NFR013		The solution shall support the addition of new integrations with minimal configuration changes to existing interfaces.
NFR014		The solution shall detect and log interface failures (e.g., transmission errors, data mismatches) and provide automated retries for transient issues.
NFR015		The solution shall ensure that data exchanged through interfaces is processed and updated in real-time or near real-time (e.g., within 5 seconds) for critical interactions.

6.2.3. User and Access Requirements

This section defines the user roles and access controls for CAREPACT Connect, ensuring secure and role-appropriate access to its features and data.

ID	Category	Description
NFR016	User Roles & Access	The solution shall implement role-based access controls in compliance with the Queensland Government Information Security Policy (IS18:2018).
NFR017		The solution shall restrict access to data and functionality according to user permissions.
NFR018		The solution shall maintain an audit log of user actions to support security and compliance.
NFR019		The solution shall enable Queensland Health users to authenticate using standard organisational credentials (e.g., Active Directory).

6.2.4. Operational Requirements

This section specifies the operational needs and constraints for CAREPACT Connect. These requirements ensure the system can be maintained and supported in a live environment.

ID	Category	Description
NFR020	Scalability & Customisation	The solution shall be scalable to support increasing volumes of referrals and activity data.
NFR021		The solution shall allow for customisation to adapt to varying workflows, language, services, etc. across healthcare services and regions.
NFR022		The solution shall allow for configurable workflows, enabling the addition of new queues, statuses, and disposition types without redevelopment
NFR023	Operating Environment	The solution shall support access from multiple device types, including desktops, tablets, and mobile devices.
NFR024		The solution shall operate in a geographically redundant environment to ensure service continuity in case of data centre outages.
NFR025	Availability	The solution shall achieve an uptime of at least 99.9% during core business hours.
NFR026	Performance	The solution shall ensure response times of under 2 seconds for 95% of user interactions, including searches, data retrieval, and form submissions, under normal load conditions.

NFR027		The solution shall be able to initially handle simultaneous access by up to 20 users with no reduction in performance.
NFR028		The solution shall provide scalable performance to accommodate increased user activity without system degradation.
NFR029	Reliability	The solution shall include mechanisms for automatic backup and restore to protect against data loss, with backups performed routinely.
NFR030		The solution shall ensure that all critical processes (e.g., referral management, data submission, and reporting) have a recovery time objective (RTO) of less than 1 hour in case of failure.
NFR031	Maintenance & Support	The solution shall include a robust change management process for updates and patches, with testing and validation before deployment to the live environment.
NFR032		The solution shall provide a user support framework, including a helpdesk, knowledge base, and training materials, with service-level agreements (SLAs) for response and resolution times.

7. Future Enhancements

While CAREPACT Connect is designed to address the immediate needs of care coordination between hospitals and RACFs, there are additional opportunities to enhance the system and achieve an even higher standard of integrated care. Some of functions are beyond the scope of the initial implementation but represent valuable future developments.

By taking a phased approach, the system can evolve over time to incorporate advanced features and integrations, ensuring it meets emerging needs without overextending initial implementation efforts. Such functionality includes:

Clinical Pathways

Future functionality should consider digital clinical pathways to assist RACF staff in assessing residents and making informed care decisions. These pathways will provide structured guidance and clear protocols for determining when to contact CAREPACT, Queensland Ambulance Service (QAS), or other healthcare providers, ensuring timely and appropriate escalation of care. By offering standardised decision support, these pathways will help RACF staff deliver consistent, high-quality care and reduce variability in response to resident needs.

Integration with QAS and Other Services

Future system enhancements should include integration with Queensland Ambulance Service and other healthcare services to improve care coordination and continuity. This integration will enable real-time data sharing with paramedics and GPs, enhancing decision-making during patient transport and enabling continuity of care across settings.

Enhanced Telehealth for Virtual Care

Future iterations of CAREPACT Connect should support advanced telehealth capabilities, allowing RACF staff to connect virtually with CAREPACT clinicians for video consultations. These consultations could also include Emergency Department consultants when required, offering comprehensive support for complex cases. Such functionality would necessitate an increased focus on mobile devices and advanced video conferencing technology, potentially requiring infrastructure and device upgrades within RACFs to ensure access across all stakeholders.

By prioritising these enhancements in a phased manner, CAREPACT Connect can continue to grow in sophistication, providing stakeholders with a scalable and future-proof solution for integrated aged care.

8. Key Stakeholders

The successful implementation of CAREPACT Connect relies on the collaboration and input of various key stakeholders. These stakeholders include healthcare providers, government bodies, and technology partners, each playing a vital role in ensuring the system's alignment with clinical needs and regulatory requirements.

Metro South Health CAREPACT Project Team

- Dr Terry Nash: Project Sponsor/Lead
- Matt Hanlon: Data Manager/SME
- Jess Lourey: Data Manager/SME
- Dr Daniel Pitt: Project Clinical Lead

CAREPACT Team Members (Users)

- Mobile Emergency Team: Delivers ED-equivalent care within RACFs
- Nurse Navigator: Streamlines care pathways for complex residents.
- In-reach Clinical Nursing Team: Coordinates discharges for residents

External

- RACF Staff: Users of systems within RACF
- General Practitioners: Key collaborators in resident care
- Queensland Ambulance Service: Key collaborators in resident care
- Software Vendors: Provide systems used by RACFs and potential vendors

Government Agencies

- Commonwealth Department of Health: Drivers of Recommendation 66.
- Queensland Health: Oversee healthcare delivery and strategy
- Australian Digital Health Agency (ADHA): Manages national digital health

Internal Queensland Government Teams

- MSHHS Emergency Dept: Potential users/beneficiaries of reduced transfers
- Healthcare Improvement Unit: Expertise in Clinical Pathways
- eHealth Team (Rae Donovan, Andrew Blanch, David Vicig): Authority on existing digital systems, health infrastructure and strategies.
- Metro South Digital team (Stephen Canaris, Erin Newton): Local governance and system expertise/support.
- Queensland Health Strategy, Policy and Reform Division: Luke Humphreys, A/Director

Evolve Health Digital Project Team

- Glen Higginbotham: Lead Analyst
- Nathan Moore: Clinical & Innovation Lead
- James Foxall: Digital Health Lead

9. Constraints

The successful design, development, and implementation of CAREPACT Connect must navigate several constraints that influence its scope, timeline, and deliverables. These constraints encompass financial, regulatory, technical, and operational considerations, many of which are inherently addressed within the mandatory requirements outlined in this document. Acknowledging these constraints ensures that the system is developed within realistic boundaries while meeting critical objectives.

Topic	Description
Budget Limitations	Development must operate within an allocated budget, requiring careful prioritisation of features. Budget constraints may also limit the ability to implement advanced functionalities during the initial release.
Compliance with Privacy and Data Regulations	The system must comply with relevant privacy and data protection laws, including the Information Privacy Act 2009 (Qld). These requirements dictate how personal, and health information is collected, stored, shared, and retained within CAREPACT Connect.
Data Security Requirements	The system must implement robust security measures to protect sensitive patient and clinical data from unauthorised access or breaches. This includes role-based access controls, audit logs, and compliance with Queensland Government Information Security Policy (IS18:2018).
Interoperability Standards	The system must adhere to established interoperability standard HL7® FHIR® Release 5, to enable seamless integration with diverse RACF clinical information systems, My Health Record, and other Queensland Health systems.
Technology Infrastructure	The system's success depends on existing platforms and connectivity across RACFs and Queensland Health. Any gaps in infrastructure may delay deployment or necessitate early upgrades, especially in areas with lower digital readiness.
Stakeholder Endorsement Proces	Multiple stakeholders, including CAREAPACT, multiple RACFs staff, and external partners, may need to be involved in reviews and design decisions. These processes may introduce delays or necessitate changes in scope.
Resource Availability	The availability of skilled personnel, including technical developers, clinical subject matter experts, and project managers, will influence the project timeline. Competing priorities within Queensland Health or RACFs may impact resource allocation.

10. Assumptions

This section outlines the assumptions made in preparing this BRS. Assumptions represent conditions believed to be true for the successful development, deployment, and operation of the system. Unlike constraints, which define limitations or restrictions, assumptions highlight dependencies and expectations that must hold for the project to achieve its objectives.

These assumptions serve as the foundation for planning and decision-making throughout the system's lifecycle. It is important to validate these assumptions regularly as development progresses to ensure alignment with real-world conditions.

Category	Topic	Description
Business Assumptions	Stakeholder Engagement	All key stakeholders, including CAREPACT and RACFs will actively participate in validating functionality and providing feedback.
	Adoption by RACFs	RACFs will adopt CAREPACT Connect and integrate it into their workflows once implemented.
Operational Assumptions	User Training & Guides	Adequate training resources will be available for CAREPACT staff, RACFs, and other stakeholders to ensure successful onboarding and system adoption.
	Support Infrastructure	Metro South Health will maintain adequate IT and operational support resources to manage the system post-deployment, assuming any gaps are addressed during implementation planning.
	Legacy Process Continuation	Manual processes (e.g., phone-based referrals) will continue alongside CAREPACT Connect where RACFs lack digital readiness.
Technical Assumptions	Integration Capability	Existing clinical systems used by RACFs and Queensland Health will have the capability (or can be enhanced) to integrate with CAREPACT Connect using HL7® FHIR® standards.
	Digital Maturity	Most RACFs will have the necessary hardware and internet connectivity, assuming they can adapt to the system with minor upgrades or training.
	Cloud Hosting	The system will leverage cloud-based infrastructure to ensure scalability and resilience.
Regulatory Assumptions	Consistent Regulatory Environment	Privacy and data security regulations (e.g., Information Privacy Act 2009 (Qld)) will not undergo significant changes during the development and deployment phases.
	Compliance Certification	The system will meet all necessary regulatory certifications required for healthcare interoperability and data security.

11. Definitions & Acronyms

Term	Definition
ABF	Activity-Based Funding
ADHA	Australian Digital Health Agency
BRS	Business Requirements Specification
CAREPACT	Comprehensive Aged Residents Emergency Partners in Assessment Care and Treatment
ED	Emergency Department
EDS	Enterprise Discharge Summary
FHIR®	Fast Healthcare Interoperability Resources
HBCIS	Hospital Based Corporate Information System (pronounced “hibiscus”- Queensland Health’s Patient Administration System)
HIU	Healthcare Improvement Unit
HL7®	Health Level Seven
MET	Mobile Emergency Team
MSHHS	Metro South Hospital and Healthcare Service (AKA Metro South Health)
QAS	Queensland Ambulance Service
RACF	Residential Aged Care Facility
Recommendation 66	Recommendation 66 of the Aged Care Royal Commission, which mandates a clinical handover process that is both received and acknowledged at the time of discharge
SDM	Substitute Decision Maker
SME	Subject Matter Expert

12. Resources & References

Reference	Location
Australian Digital Health Agency National Digital Health Strategy 2023-2028 Delivery Roadmap	https://www.digitalhealth.gov.au/sites/default/files/documents/national-digital-health-strategy-roadmap-2023-2028.pdf
Australian Digital Health Agency National Healthcare Interoperability Plan 2023-2028	https://www.digitalhealth.gov.au/sites/default/files/documents/national-healthcare-interoperability-plan-2023-2028.pdf
Digital Health Aged Care Clinical Information System (ACCIS) Standards	https://www.digitalhealth.gov.au/healthcare-providers/initiatives-and-programs/digital-health-standards/aged-care-clinical-information-system-accis-standards
Digital Health Standards Catalogue	https://developer.digitalhealth.gov.au/standards
HL7® FHIR®	https://www.hl7.org/fhir/
Information Privacy Act 2009 (Qld)	https://www.legislation.qld.gov.au/view/html/inforce/current/act-2009-014
Metro South Health Strategic Plan 2024-2028	https://www.metrosouth.health.qld.gov.au/__data/assets/pdf_file/0021/222195/strategic-plan-msh-2024-2028.pdf
Public Records Act 2002 (Qld)	https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-2002-011
Queensland Government- Digital Health 2031	https://www.health.qld.gov.au/__data/assets/pdf_file/0020/1153910/QH_Digital_Health_2031.pdf
Queensland Government Information Security Policy (IS18:2018)	https://www.forgov.qld.gov.au/information-and-communication-technology/qgea-policies-standards-and-guidelines/information-security-policy-is18-2018
Queensland Health Data Management Policy (QH-POL-279:2014)	https://www.health.qld.gov.au/__data/assets/pdf_file/0025/396052/qh-pol-279.pdf