Territory Kidney Care

Evaluation Framework

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Background

Territory Kidney Care is an integrated clinical decision support system for the early identification and management of chronic kidney disease. TKC is the result of several years of collaborative work between Menzies, Aboriginal Community controlled primary health services and the Department of Health (DoH). The intended outcome of TKC is to improve the integration of health care and the implementation of evidence-based protocols to reduce the burden of chronic kidney disease in the NT and reduce the demand for end stage kidney disease treatments. National and international guidelines support a suite of measures that include regularly monitoring of people at risk, ongoing evidence-based management by primary health services, and early specialist intervention and support.

TKC is not a research project. It provides a platform for healthcare integration, knowledge translation and implementation of evidence-based approaches with rigorous evaluation of its impact.

Menzies, through its unique position and ability to attract philanthropic funding, is leading this important initiative in partnership with NT Renal Services. Funding for the development of TKC has been allocated in stages over 4 years, with each funding allocation dependent on the successful attainment of pre-determined milestones and deliverables.

Menzies 'role is to ensure that the:

- System is built to meet stakeholder expectations
- Milestones and deliverables agreed to with the Funder are met
- System is evaluated for impact and sustainability, and
- Based upon demonstration of impact the
- System is transitioned seamlessly to the DoH.

Rationale for TKC

The burden of chronic disease is increasing in Australia with the future health and economic impact projected to be significant. Aboriginal Territorians experience particularly high rates of chronic kidney disease (CKD), diabetes and cardiovascular disease (CVD). These diseases persist over a long period and require intensive management. They are strongly associated with each other and there is substantial evidence that managing one condition well improves management and outcomes for other related conditions.

However, the service environment in the NT challenges the delivery of primary health care. Factors such as a large, sparsely populated catchment area, a highly mobile population, high staff turnover, restricted PHC funding and limited specialist support can lead to gaps in monitoring and the delivery of evidence-based care. Therefore, for a population with a high burden of chronic disease, there are significant health and economic gains to be made from the establishment of shared prevention, management and treatment strategies.

Objectives of TKC

The overall aim of TKC is to support primary health clinicians improve the identification and management of people with kidney disease, delay the progression to dialysis and support planning of delivery of renal services.

The specific objectives are to:

- Promote and facilitate the integration of patient care between different health services and between primary and hospital-based clinicians, close the information gap and improve the patient journey.
- Increase the identification of undiagnosed CKD, assist with monitoring of evidence-based care and provide a more complete picture of patient care including results and treatment delivered across health services.
- Improve the focus of hospital-based specialist support and provide risk stratification for disease progression so that patients of high risk are prioritised and care is targeted to allow primary health care staff to focus on patients who will benefit the most.
- Streamline the renal specialist referral process and facilitate timely evidence-based care, reducing the need for face to face appointments and patient travel. This will allow clinicians who have a better rapport and relationship with patients and their families to discuss management options and develop a more planned approach to care and end stage kidney disease treatment.
- In recognition of the high rates of staff turnover in primary health services, provide support to new staff, directing them to best practice guidelines, assist with staff education and the delivery of evidence-based care tailored to individual patients.
- Enhance mechanisms for quality improvement through collaboration and sharing of data, analysing reports, identifying service and information gaps and determining solutions together.
- Provide information for service improvement, service planning and advocacy for resourcing.

Evaluation Approach

The Evaluation Framework for Territory Kidney Care includes outcome measurements that are important to our partner organisations, stakeholders and funders. The performance criteria should include measurements of effectiveness, efficiency, economic impact, equity and sustainability.

Overall, the Territory Kidney Care Evaluation Framework will consider a range of objectives from the conceptual phase of the project (including the design and build) to the economic impact, which will consider health outcomes of patients, changes in health service utilisation and financial sustainability. The inclusion/exclusion of specific performance criteria will depend on a number of factors including partners and their priorities, progression to full implementation and sufficient time post implementation for an outcome to be evident. However, the intention is that this Framework would form the basis for ongoing evaluation of the impact of the program over the next 5 -10 years.

The draft performance criteria outlined in this document are intended as a basis from which we will build with our partners a strong evaluation matrix. Together we will determine the criteria of most importance and value, the evidence required and whether it can be collected and measured within our time frame for project completion.

Evaluation Objectives

1. Evaluate the design and implementation of TKC and its ability to meet stakeholder expectations in terms of health service value-add including creating efficiencies.
2. Evaluate the outputs of TKC to enhance the integration, quality and timeliness of patient care for people with kidney disease.
3. Evaluate the impact of TKC to provide reliable, timely and high-quality information for quality improvement, service planning and advocacy purposes.
4. Evaluate the costs and benefits of TKC across health care systems and services.

Evaluation design

The evaluation methodology incorporates components of formative, process and summative evaluation.

1. *Formative evaluation* will assess the design and development of the system and how well it met participant and stakeholder expectations. Formative questions will help us identify modifications that will improve the system(1). Questions may include:
    a. Is the TKC system relevant, useful and of high quality? Does it add value?
    b. Are there aspects/functionalities of the system that enable/imped uptake by the Clinical Support Unit (CSU) and clinician engagement?
    c. What components do stakeholders find the most beneficial/useful?
    d. How can the system be improved /strengthened for release of TKC V2?
    e. What additional functionalities do stakeholders believe are ‘must have’ or ‘should have’?
2. *Process evaluation* will assess the implementation of the system into the operational environment. Process questions will provide evidence of changes required to improve uptake and embedding of the outputs of TKC into business processes within partner organisations(2). Questions may include:

a. Was implementation of the system into work practices under taken in a collaborative manner and with consideration of resources/time available and required?
b. Were implementation plans developed with partner organisations that considered the local context?
c. Were sufficient resources offered and made available in a timely manner to participant health services for implementation?
d. Were the outputs of TKC produced and delivered in accordance with stakeholder expectations?
e. What challenges did the CSU face with incorporating the system into usual work practices?
f. What challenges did participant health services encounter with receiving, using and disseminating the outputs from TKC?
g. What changes can be made in V2 to improve the system and outputs for end users and new stakeholders engaging with TKC?

3. *Summative and Outcome Evaluation*. Summative evaluation will help us identify early successes in achieving the desired outputs of the system. These questions will focus on the outcomes in the first 12-18 months of operation. Outcome evaluation will examine the longer-term impact of the system, the causal relationships between outcomes and the TKC system and determine the sustainability and the cost benefits of TKC. These gains are unlikely to be realised in the first 18 months and should be assessed over the next three to five years. Questions may include:
    a. What impact did the TKC system have on creating efficiencies within the CSU?
    b. What impact did the outputs have on the knowledge, behaviour/practices of primary health clinicians?
    c. Did the outputs from TKC provide high quality and relevant information and did this in turn enhance the quality of care provided by health services?
    d. Did the outputs raise community awareness regarding kidney disease, improve self-management and self-determination of treatment options?
    e. Does the system provide a cost benefit, should it be continued, is it transferrable?
    f. Did the implementation of TKC identify potential unmet workforce capacity in the system and if so, what are the nature of the additional capacity required?

Combined, the approaches provide useful information on the status of the program, the ongoing ability to achieve the desired outcomes and the sustainability of processes and systems.

Specific questions under each component, the metrics that answer the question, how they are measured, and the data sources are more fully described in Table 2 and Table 3.

Data sources and data collection

- Historical data – previous analysis conducted with a range of Aboriginal primary health services and TEHS Renal Services
- Quantitative
    - Baseline data taken as of June 2017
    - TKC outputs – quarterly reports
    - User acceptability data collection sheets
- Qualitative
    - Interviews with primary health clinicians, hospital-based clinicians including diabetic and renal specialists and program managers

- Workshops, surveys and focus groups
- Possible case studies of patient journey pre, post and ongoing.

Audience

The Evaluation Plan is aimed at addressing the requirements and expectations of several stakeholders.

a. ***The Funder***: The system is assessed for its ability to provide timely information to improve patient care, service planning and eventually reduce the resource demand on health services.
a. ***The Department of Health***: the overall costs and benefits of the system.
b. ***Participant Primary Health Services***: the impact on primary health service processes and benefit to clients in terms of their care and outcomes.
c. ***Steering Committee***: the system has met stakeholder expectations to increase the integration of patient care, improve health service delivery and patient outcomes.

Target population

- People with chronic disease that confers a high risk for kidney disease and those with early and advanced stage of kidney disease.
- Primary and tertiary health service clinicians.

Limitations

The full impact and benefits of a system like TKC are unlikely to be fully realised within 12 to 24 months. The staged roll out of TKC and incremental inclusion of health services will result in some services only experiencing the benefits of TKC for a short period before the final assessment associated with the Funding Agreement. Improved patient outcomes, decreases in service demand and improvements in patient and health service satisfaction are more likely to be evident in three to five years(3). It will be important to continue the regular monitoring and evaluation of the program for an extended period and in an ongoing fashion, if the full impact and sustainability of TKC is to be demonstrated.

Evaluation Log Frame (Theory of Change)

The evaluation log frame describes the inputs, activities and outputs of TKC and the expected outcomes for the short, medium and long term. There are also a number of assumptions that will influence the implementation and uptake of TKC and these will need to be clearly defined. Assumptions may relate to the local context and not have the same influence or impact across all health services and therefore it is important that these are constantly reviewed and updated. Additionally, external factors currently unknown or vaguely quantified, are likely to compete for the causal relationships between input and outcomes. (For instance: is there a clear relationship between the implementation of TKC and changes in the number of people requiring dialysis?)

Table 1: Theory of Change

NEED	INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES What changes?		
Why should the program exist?	What goes into it?	What happens?	What is produced?	SHORT	MEDIUM	LONG
Improve care integration between health services and close service delivery gaps Increase PHC access to Nephrology services Earlier identification and management of people with CKD Slow progression of CKD and delay the requirement for RRT Create efficiencies in service delivery Provide reliable whole of NT data for service planning	Newly designed and deployed health information system Clinical Support Unit Staff trained in data analysis, system maintenance Department of Health IT architecture/maintenance and support PH staff clinician, CQI and Chronic disease/kidney disease staff PH data ETL (extract, transfer, load)	Monitoring of 'at risk' cohort for undiagnosed CKD Monitoring of 'at risk' cohort for potential exacerbations eg contraindicated drugs, recent AKI Risk stratification by CKD stage and clinical indices Alerts for clinically significant events Alerts for gaps in evidence-based care Projections to ESKD	Level 1 reports – triaging, prioritising and streamlining care Level 2 reports – clinic preparation, communication, management and CQI of care, creating efficiencies Level 3 reports – evaluating care, processes and forward planning	Earlier identification and intervention in clinically significant events Greater implementation and adherence to CKD treatment guidelines including medication management Closer monitoring of at risk patients and reduced unforeseen events Triaging of patients resulting in earlier specialist advice, appropriate referrals, reduced face to face reviews, decreased outreach requirements and increased telehealth	Greater attainment of clinical targets eg blood pressure, HbA1c, Greater integration of care across primary/tertiary services Increased number of patients with access and planned RRT start Decreased unplanned admissions Improved understanding of burden of CKD disease and reliable evidence for forward planning Improved patient understanding of condition and informed decision making regarding future care	Evidence of slowing of progression of ESKD Decline in ESKD incidence rates Improved patient engagement with health services Evidence of cost benefits of model

ASSUMPTIONS: Mutual goal of collaborators is to improve health outcomes of patients. PHC and tertiary systems have capacity to meet additional workforce demands generated by TKC in addition to any other demands.

EXTERNAL FACTORS: Mulitple and conflicting priorities faced by patients and health services

Evaluation Questions

The evaluation questions stem from the Evaluation Objectives. They will focus on the design and functions of the system, the implementation/uptake and the outputs and whether a clear relationship can be described between the use of TKC and improvements according to criteria of efficiency, effectiveness, equity, economic value and sustainability. We may also consider transferability and scalability.

Table 2: Evaluation Metric

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
1. Evaluate the design of TKC to meet stakeholder expectations in terms of health service value-add including creating efficiencies				
Efficiency and effectiveness objectives	✓ The design of TKC addresses an identified gap in health service delivery. ✓ The design reflects user and receiver requirements in terms of value-add. ✓ The system was developed in a collaborative and inclusive manner, addressing concerns of stakeholders.	Completed and endorsed documentation • Risk Management Plan • TKC Clinical Risk Management Plan for Development and Deployment of ICT • Risk Benefit Analysis • Legal Advice Consent Model • MOU • Data Participation Agreement • Primary Health Service Implementation Plan	TKC documentation Funder, DoH, Steering Committee, Health Service managers, Steering Committee Minutes, Workshop outcomes, Clinical and Technical Reference Group minute	TKC Project Team

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
a. To what extent does the design of TKC meet the operational requirements of the Clinical Support Unit?				
Formative	• Was there sufficient input from renal clinicians in the design of the CSU interface? • Was there sufficient time allocated to the testing and validation of the CSU interface? • Were resources provided adequate to ensure comprehensive testing? • Were recommended or suggested changes incorporated in the system?	Satisfaction Level	CSU team	feedback, interviews, surveys, testing proforma
b. To what extent do the intended outputs reflect the needs and requests of primary health service stakeholders?				
Formative	• Was there sufficient engagement with stakeholders and health services supplying data regarding their requirements? • Was there sufficient collaboration with stakeholders to ensure activities/outputs were not duplicated? • Did stakeholders determine the content and format of outputs? • Were legal or clinical concerns adequately addressed in the design of TKC?	Satisfaction Level	Primary health services, clinicians, managers and CEO	feedback, interviews, surveys, testing proforma
c. To what extent does the TKC design create efficiencies for CSU staff in the review of patient information?				
Formative	• Is the user interface user-friendly, intuitive, easy to navigate?	Satisfaction Level	CSU team	feedback, interviews, surveys

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
	• Does it provide useful filterable items? • Is the system easily accessible? • Are there functionalities that are redundant or missing that would improve the system?			
d. Was the implementation of TKC conducted in a manner to ensure maximum confidence and engagement of health services in the process?				
Process	• Was there sufficient collaboration between the TKC project team and participant health services to ensure a sound understanding of the local context, operational environment and service needs? • Was the heath service capable and ready of participating, was a SAT (systems assessment tool) offered to health services? • Was there adequate and sufficient training and documentation provided and available to assist individual health services with education and implementation? • Was an implementation plan created with each health service that accounted for local systems and processes? • Was TKC implemented into the production environment through a planned/staged process?	Satisfaction Level	Participant Primary Health Services	feedback, interviews, surveys

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
	• Were there appropriate systems in place for auditing issues and addressing them quickly? • Were there mechanisms in place for feedback to the TKC project team?			
e. Was the implementation of TKC conducted in a manner to ensure maximum uptake by the CSU?				
Process	• Was sufficient support provided to individual members of the CSU to ensure full understanding and familiarity with all aspects of TKC? • Was there adequate and sufficient training and documentation provided and available for users of the system? • Were there appropriate systems in place for identifying system issues and addressing them quickly? • Was there a process for user support and troubleshooting? • Was TKC implemented into the production environment through a planned/staged process? • Were there processes for ongoing feedback and opportunities to make changes to the system?	Satisfaction Level	CSU team	feedback, interviews, surveys

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
2. Evaluate the outputs of TKC to enhance the integration, quality and timeliness of patient care for people with kidney disease				
Equity and effectiveness objectives	✓ TKC enhances communication between primary health services and renal clinicians. ✓ TKC information to PHC targets those most at risk, providing useful and implementable advice. ✓ TKC improves access to complete, accurate and up to date information on patient care.	Increase in number and types of touch points between primary and tertiary services	Referrals Level 1 reports Level 2 reports Case conferences Telehealth Urban patient reviews	TKC audit reports Renal Service Outreach rosters Clinic bookings Interviews
a. How has TKC improved timely access to patient information for the CSU?				
Summative	• Is the information in TKC complete, accurate and up to date? • Has TKC been incorporated into usual work practices of the CSU? • Has the system reduced time spent on clinic preparation and document review? • Has TKC supported earlier patient risk stratification facilitating less face to face clinic attendances, greater uptake of case conferences and telehealth? • Is there evidence TKC has facilitated earlier identification of patients with undiagnosed CKD?	Number and type of level 1 reports sent and actioned Level 2 reports and decreasing numbers of undiagnosed CKD, incorrect CKD management plans, incorrect medications Decrease in patient travel Decrease in inappropriate referrals Increase in number of CKD patients with documented	CSU team TKC Reports and audits	Reports, feedback, interviews, surveys

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
	• Is there evidence TKC accurately identifies clinically significant events, pre-empting unplanned tertiary interventions? • Is there evidence TKC supports and promotes early intervention into the management of patients through the distribution of Level 2 reports?	nephrologist review/status report		
b. To what extent has TKC and the CSU provided timely new knowledge and advice to PHC to support patient care?				
Summative	• Are notifications to PHC of patient advice provided in a manner and format that are accessible and easily integrated into business as usual? • Are TKC alerts (clinically significant events) of commensurable importance to the condition and care recommended? • Is information provided in Level 2 reports considered useful to both the PHC practice and patient care? • Have the outputs of TKC changed the knowledge/behaviour or practice of clinicians? • Do primary health clinicians feel better informed about evidence-based management? • Are the outputs of TKC considered a benefit to patient care or a hindrance to clinic management?	Satisfaction Reporting as above	Primary Health Clinicians	feedback, interviews, surveys

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
	• Has the implementation of TKC enhanced relationships between primary and tertiary clinicians or created tensions?			
3. Evaluate the impact of TKC to provide reliable, timely and high-quality information for quality improvement, service planning and advocacy purposes.				
Equity/efficacy/ sustainability objectives	✓ TKC outputs and audit reports provide value to primary health services. ✓ TKC has the ability to provide accurate, real-time information on service usage by location to support timely and flexible service planning. ✓ TKC reports support and enhance quality assurance processes.	Reports and information are embedded into business as usual processes		
a. To what extent were TKC Level 2 and 3 reports designed with the local context in mind?				
Summative	• Were reporting outputs designed in collaboration with the local health service? • Are the formats easily accessible, information easily understandable and actionable? • Are reports considered reliable and reflective of the health service population? • Are report outputs used for quality improvement purposes? • Are report outputs used for service planning advocacy or annual reports?	TKC level 2 and Level 3 reports Satisfaction Level	PHC staff and TKC reports	Interviews, evidence of secondary use of reports

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
	• Does the PHC consider that TKC Level 2 and 3 reports are a value -add?			
b. To what extent has TKC Level 3 reports provided actionable and useful information for service providers?				
Summative	• Are de-identified and aggregated reports available by service location? • Do service providers believe the reports are reliable in terms of population groupings and cohort denominators? • Are outputs used in forward planning? • Are outputs considered a value add to current available reports?	As above	PHC/ DoH/Renal Services/DCIS	Interviews and secondary use of reports
4. Evaluate the costs and benefits of TKC across health care systems and services.				
Economic viability/sustainability/equity objectives	✓ The costs associated with the ongoing delivery of TKC are considered acceptable given the benefits. ✓ The cost savings from earlier intervention and clinical decision support in the primary health sector can be quantified. ✓ Stakeholders acknowledge the value and contribution of TKC to clinical care. ✓ There is evidence TKC delivers tangible benefits to the health system.	Cost benefit analysis	Primary Health Services DoH	TKC and PHC
Outcomes	• Are there changes in the number of patients commencing RRT in a planned	Snapshot reports on RRT commencement without	TKC	TKC project team

Merit Criteria	Evaluation Question	Indicator	Data Sources	Data collection
	manner and can this be associated with TKC reports? Can the costs savings from avoided unplanned RRT starts be quantified? • Are there changes in the number of patients seen in outreach clinics and is this associated with TKC triaging and risk stratification reports and advice to PHC? Is there evidence of greater non face to face interactions? Can cost savings related to a greater uptake of case conferencing, telehealth and reduction in face to face consultations be calculated? • Can associations between early identification of clinically significant events and avoidable hospital admissions be made and quantified? Is there evidence TKC has created efficiencies in risk stratification and triaging CKD patients, reducing the number of face to face interactions? • Is there evidence of earlier primary health intervention, triggered by a TKC output resulting in improved management of CKD? • Evidence of changes in unplanned hospital admissions associated with increased TKC level 1 reports.	fistula. Costs calculation based on AR-DRG Changes in renal service clinic bookings over time Changes in cost of travel for renal clinics over time Changes in uptake of case conferencing (MBS items) and Telehealth (clinic bookings) over time. Audit of level 1 reports sent and actioned, Audit of level 2 reports sent and actioned		

Table 3: Indicators and data sources

INDICATORS	OUTCOMES	DEFINITION How is it calculated?	DATA SOURCE How is it measured?	FREQUENCY How often measured?	TARGET Target value	BASELINE 2017
Improvements in screening of 'at risk patients'	Early identification of people with CKD	Proportion of people with ICPC code for diabetes, hypertension, CVD who have both an eGFR/ACR yearly.	Decrease in number of At Risk cohort without eGFR/ACR in previous 12 months, reported to PH as requiring screening	Quarterly for previous 12 months	80%	
Earlier identification of people with advanced CKD	Earlier intervention and improved management of CKD delaying progression	Proportion of people with calculated CKD Stage 3,4 or 5 without a corresponding diagnosis of CKD	Conflict report using last reported value and last reported diagnosis	Monthly	90%	
Earlier identification and management of clinically significant event	Earlier intervention and improved management of CKD delaying progression	Number of Alerts that generate an actionable item by CSU and primary health clinician	Audit report of Alerts compared to uptake of recommendations generated from alert eg change in BP medications	Monthly or more frequently	100%	
Timely and appropriate specialist referrals	Increase specialist support to PHC, decrease in unnecessary referrals and decrease need for patient travel	Patients reviewed by the CSU in TKC and status report provided to PHC from nephrologist regarding recommended care and next steps	Number of CKD 1 and 2 patients referred with TKC status report but not physically reviewed. Number of people with CKD stage 3/4 with TKC suggested referral to Nephrologist and status report. Changes in specialist referral rates Changes in requirement for patient travel, uptake of case	Quarterly		

INDICATORS	OUTCOMES	DEFINITION How is it calculated?	DATA SOURCE How is it measured?	FREQUENCY How often measured?	TARGET Target value	BASELINE 2017
			conferencing and use of telehealth			
Identification of patients in advanced CKD without an access	Decreased in unplanned starts	Proportion of patients with calculated CKD stage 5 without procedure code for renal access	Changes in the number of people commencing RRT with a fistula in situ at least 6 weeks prior to first RRT	3 monthly	100%	
Decreased late referrals	Improved management and delay in progression to ESKD	Pre-emptive recommendation for referral to specialist based on TKC information and triaging by CSU	Decrease in number of patients referred less than 3 months prior to commencing RRT	3 monthly	100%	
Increase in best practice management according to CARPA and KHA guidelines	Supporting PHS effective management of patients and minimizing specialist intervention	Patients on CKD care plan with recommended assessments and interventions completed for that care plan	Proportion of patients on CKD care plan without the recommended assessment and interventions completed for that care plan	3 monthly	70%	
Decreased travel expenditure and increase in costs avoided	Positive cost benefit analysis supporting sustainability	Reduction in patient travel costs Reduction in number of specialist outreach visits Reduction in unplanned RRT starts Reduction in avoidable admissions	Patient travel records Scheduled outreach visits RRT start without fistula RRT start with overnight admission Rate of clinically significant events identified and actioned	18months 3 years and 5 years	10% improvement 25% improvement Improvement sustained	

Evaluation Management

The Evaluation plan has been circulated to stakeholders and the Executive Steering Committee for endorsement. The evaluation will be managed by the TKC Project team with interim reports provided to the Executive Steering committee and stakeholders. A process that supports compilation of data, synthesis and sense making with stakeholders will be implemented. Templates for collecting user feedback relating to the CSU interface and interpretability of Level 2 and 3 reports have been developed.

As TKC is planned for a staged implementation, it is expected that the process evaluation component will be ongoing over the next 12 months although the formative evaluation, will by necessity have an end date. We expect the components related to the formative evaluation will be completed by August/September 2019.

Reporting

Interim reports will be provided at 6 monthly intervals to illustrate changes in activity and uptake and identify implementation issues so that these can be addressed early.

The interim and final reporting formats will be determined in collaboration with stakeholders to ensure that findings are communicated in accessible and easily digestible formats for all interested parties.

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