DCB0129 Clinical Safety Case Report
Sonera Clinic
Sonera

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0.2	16 Apr 2026	Hazard log populated with 18 hazards
0.3	18 Apr 2026	Clinical risk evaluation added
0.4	21 Apr 2026	Clinical risk control added
0.5	23 Apr 2026	Residual risk evaluation added
0.6	25 Apr 2026	Clinical risk analysis added
0.7	28 Apr 2026	Clinical risk management system added
0.8	30 Apr 2026	Safety functionality overview added
0.9	02 May 2026	Test results and incident log added
1.0	14 May 2026	Approved and published

Distribution

Name	Role	Version Received
Dr Anna Kowalski	Medical Director	1.0
Mr Tom Bradley	Clinical Safety Officer	1.0
Ms Priya Nair	Head of Clinical Operations	1.0
Mr James Whitfield	Chief Technology Officer	1.0
Dr Sarah Okonkwo	Clinical Safety Officer, Partner Clinic	1.0
Mr David Chen	Head of Quality and Governance	1.0

Related Documents

Document	Reference	Location
Clinical Safety Management Plan	SCSMP-001	Sonera Clinic Quality Management System
Hazard Log	SCHL-001	Sonera Clinic Clinical Safety Folder
Clinical Risk Management Policy	SCRMP-001	Sonera Clinic Quality Management System
Incident Management Procedure	SCIMP-001	Sonera Clinic Quality Management System
Data Protection Impact Assessment	SCDPIA-001	Sonera Clinic Information Governance Folder
Business Continuity Plan	SCBCP-001	Sonera Clinic Quality Management System
Clinical Safety Training Log	SCTL-001	Sonera Clinic Training Records
Supplier Clinical Safety Assessment	SCSA-001	Sonera Clinic Clinical Safety Folder
Clinical Safety Officer Appointment Letter	SCAL-001	Sonera Clinic Clinical Safety Folder
Clinical Safety Officer Job Description	SCJD-001	Sonera Clinic Human Resources Folder
Standard Clinical Safety Clauses	SCSC-001	Sonera Clinic Contracts Folder

Training Log

Name	Role	Training Completed	Next Due
Tom Bradley	Clinical Safety Officer	12 Mar 2026	12 Mar 2027
Dr Anna Kowalski	Medical Director	14 Apr 2026	14 Apr 2027
Priya Nair	Head of Clinical Operations	14 Apr 2026	14 Apr 2027
James Whitfield	Chief Technology Officer	14 Apr 2026	14 Apr 2027

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Abbreviations & Definitions

Term	Definition
AES	Advanced Encryption Standard
API	Application Programming Interface
CAPA	Corrective and Preventive Action
CSO	Clinical Safety Officer
DCB0129	Clinical Risk Management: its Application in the Manufacture of Health IT Systems
DCB0160	Clinical Risk Management: its Application in the Deployment and Use of Health IT Systems
DPIA	Data Protection Impact Assessment
EHR	Electronic Health Record
GDPR	General Data Protection Regulation
HL7	Health Level Seven International
HSCN	Health and Social Care Network
ICO	Information Commissioner's Office
IG	Information Governance
MDR	Medical Device Regulation
MFA	Multi-Factor Authentication
NHS	National Health Service
PCN	Primary Care Network
PDS	Personal Demographics Service
PID	Patient Identifiable Data
RBAC	Role-Based Access Control
SCCI	Standard Clinical Safety Clauses
SCSC	Sonera Clinic Clinical Safety Case Report
SCSMP	Sonera Clinic Clinical Safety Management Plan
SCHL	Sonera Clinic Hazard Log
SCRMP	Sonera Clinic Clinical Risk Management Policy
SMS	Short Message Service
TLS	Transport Layer Security
UAT	User Acceptance Testing

Introduction

Purpose of this Report

This Clinical Safety Case Report (CSCR) documents the clinical safety assessment of the Sonera Clinic platform, a digital primary care service delivered by Sonera Ltd. It has been prepared in accordance with the NHS England DCB0129 standard for the manufacture of health IT systems and DCB0160 for their deployment and use.

The purpose of this report is to demonstrate that clinical risks associated with the Sonera Clinic platform have been identified, assessed, controlled and reviewed to an acceptable level before the service is released to patients. It provides the evidence base for the Clinical Safety Officer's decision to authorise the service to proceed.

Scope

This report covers the Sonera Clinic platform as it operates in England, including:

- The patient-facing web application and mobile interface
- The clinician consultation workspace
- The integration with the NHS Personal Demographics Service (PDS)
- The integration with the Electronic Prescription Service (EPS)
- The integration with the GP practice clinical system via HL7 messaging
- The video consultation functionality
- The secure messaging functionality
- The data hosting infrastructure and backup arrangements

It does not cover the clinical content of consultations, the clinical governance of individual clinicians, or the operational processes of partner GP practices, except where those processes interact with the platform.

Intended Audience

This report is intended for:

- The Clinical Safety Officer responsible for the service
- The Medical Director and Board of Sonera Ltd
- Partner GP practices considering adoption of the service
- The NHS England Digital Clinical Safety team, if requested
- Internal auditors and quality assurance reviewers

System Description & Overview

Purpose of the System

Sonera Clinic is a digital primary care service that enables patients registered with participating GP practices to request consultations with clinicians, receive clinical advice, and obtain prescriptions where clinically appropriate, without attending a physical surgery.

The platform is designed to:

- Reduce unnecessary face-to-face appointments for straightforward clinical queries
- Improve access for patients who work, have caring responsibilities, or live in rural areas
- Free GP capacity for patients who require in-person assessment
- Maintain a complete and accurate clinical record in the patient's GP practice system

Clinical Workflow

The following diagram shows the end-to-end clinical workflow from patient request to record update.

Users & Roles

The following user roles interact with the system:

Role	Description	Access Level
Patient	Registered patient of a participating GP practice	Own record only
Clinician	GMC-registered doctor employed by Sonera Ltd	Assigned patients only
Clinical Lead	Senior clinician responsible for clinical governance	All patients, audit reports
Administrator	Non-clinical staff managing bookings and referrals	Scheduling and demographics only
System Administrator	Technical staff managing platform infrastructure	Infrastructure only, no patient data

Interfaces

The system interfaces with the following external systems:

System	Direction	Purpose
NHS login	Inbound	Patient identity verification
PDS	Bidirectional	Patient demographics lookup and update
EPS	Outbound	Electronic prescription transmission
GP practice clinical system	Outbound	Clinical record update via HL7 v2.5
Video platform	Bidirectional	Video consultation delivery
SMS gateway	Outbound	Appointment reminders and notifications

Clinical Safety Management System

Governance

Clinical safety governance is overseen by the Clinical Safety Committee, which meets quarterly and reports to the Board of Sonera Ltd. The committee reviews the hazard log, incident log, clinical risk evaluations and the outcomes of clinical audits.

The Clinical Safety Officer is a GMC-registered GP with experience in digital primary care and has completed the DCB0129 Clinical Safety Officer training programme.

Clinical Risk Management Process

The clinical risk management process follows the DCB0129 standard and is documented in the Sonera Clinic Clinical Risk Management Policy (SCRMP-001). The process comprises:

1. Hazard identification
2. Risk analysis
3. Risk evaluation
4. Risk control
5. Residual risk evaluation
6. Review and monitoring

Incident Management

Clinical incidents are reported through the Sonera Clinic incident management system and investigated in accordance with the Incident Management Procedure (SCIMP-001). Incidents with potential clinical safety implications are escalated to the Clinical Safety Officer within 24 hours of identification.

Training

All clinicians receive clinical safety training on the platform before their first consultation. Training records are maintained in the Sonera Clinic training log (SCTL-001).

Safety Functionality Overview

Clinical Safety Features

The following safety features are built into the platform:

- **Red flag symptom checker** — patients are prompted to seek emergency care if they report symptoms such as chest pain, stroke symptoms or severe breathing difficulty
- **Mandatory clinician review** — no prescription can be issued without a clinician reviewing the full consultation record
- **Duplicate prescription alert** — the system warns clinicians if a medication has been prescribed in the last 28 days
- **Allergy alert** — the system checks prescribed medications against the patient's recorded allergies
- **Session timeout** — clinician sessions expire after 15 minutes of inactivity
- **Two-factor authentication** — required for all clinician logins

Smart Alert Decisions

The following alert decisions are implemented:

Trigger	Alert Type	Action Required
Patient reports chest pain	Red flag	Advise to call 999 immediately
Patient reports stroke symptoms	Red flag	Advise to call 999 immediately
Medication prescribed within 28 days	Duplicate	Clinician must confirm clinical reason
Medication matches recorded allergy	Allergy	Clinician must override with reason
Consultation idle for 15 minutes	Timeout	Session locked, re-authentication required

System Dependencies

The platform depends on the following third-party services:

Service	Provider	Criticality
Cloud hosting	Amazon Web Services	High
Video consultation	Twilio Video	High
SMS notifications	Twilio SMS	Medium
Identity verification	NHS login	High
Prescription transmission	EPS via TPP SystmOne	High
Patient record integration	TPP SystmOne	High

Clinical Risk Analysis

Risk Scoring Matrix

Risks are scored using a 5 × 5 matrix of severity and likelihood. The risk score is the product of the two values.

Severity	1 — Negligible	2 — Minor	3 — Moderate	4 — Major	5 — Catastrophic
5 — Almost certain	5	10	15	20	25
4 — Likely	4	8	12	16	20
3 — Possible	3	6	9	12	15
2 — Unlikely	2	4	6	8	10
1 — Rare	1	2	3	4	5

Risk Acceptability Criteria

Score	Acceptability	Action
1–4	Acceptable	No further action required
5–9	Tolerable	Monitor and review
10–15	Undesirable	Mitigation required before release
16–25	Unacceptable	Must not proceed

AI Clinician

The platform includes an AI clinician that conducts the initial patient consultation and generates a clinical summary for the human clinician to review. The AI clinician is not authorised to issue prescriptions, make referrals or provide a diagnosis. All AI outputs are reviewed by a human clinician before any clinical action is taken.

AI Clinician Risk Management

The AI clinician has been assessed against the following risk categories:

Risk	Mitigation
Hallucination of clinical information	Output is structured and constrained; clinician reviews all content
Failure to recognise red flag symptoms	Red flag checker operates independently of the AI clinician
Inappropriate reassurance	AI clinician is prohibited from providing reassurance on high-risk presentations
Bias in clinical recommendations	Model outputs are monitored for demographic bias in quarterly audit
Model drift	Model version is locked; changes require clinical safety review

Clinical Risk Analysis Process

Each hazard is analysed by considering:

- The initiating event or failure mode
- The potential harm to the patient
- The existing controls in place
- The likelihood of the harm occurring
- The severity of the harm if it occurs

The analysis is recorded in the hazard log (SCHL-001) and reviewed at each quarterly clinical safety committee meeting.

Clinical Risk Evaluation

Risk Evaluation Methodology

Risks are evaluated by comparing the initial risk score against the acceptability criteria. Risks scoring 10 or above require mitigation before the service can proceed. Risks scoring 16 or above must not proceed under any circumstances.

Risk Register Summary

Hazard ID	Description	Initial Score	Residual Score
HAZ-001	Patient misses urgent red flag symptom	16	8
HAZ-002	Duplicate prescription issued	12	4
HAZ-003	Prescription issued despite recorded allergy	15	5
HAZ-004	Patient identity misattributed	12	4
HAZ-005	Clinical record not updated in GP system	9	3
HAZ-006	Video consultation fails mid-consultation	6	2
HAZ-007	Unauthorised access to patient record	15	5
HAZ-008	Data breach of patient identifiable data	20	8
HAZ-009	Clinician session left unattended	9	3
HAZ-010	Incorrect medication dose prescribed	12	4
HAZ-011	Delayed response to urgent consultation request	8	4
HAZ-012	Patient misunderstands AI clinician output	8	4
HAZ-013	AI clinician hallucination of clinical information	12	4
HAZ-014	AI clinician failure to recognise red flag symptoms	16	8
HAZ-015	AI clinician inappropriate reassurance	12	4
HAZ-016	AI clinician bias in clinical recommendations	8	4
HAZ-017	AI clinician model drift	8	4
HAZ-018	AI clinician output misinterpreted by clinician	8	4

Clinical Risk Control

Risk Control Measures

Residual Risk Evaluation

Residual Risk Summary

Residual Risk Acceptability

All residual risks are within the tolerable or acceptable range. No risk remains in the undesirable or unacceptable range following the application of control measures.

Hazard Log

The full hazard log is maintained as a separate document (SCHL-001). The following table summarises the hazards identified during the clinical risk analysis.

Hazard ID	Description	Initial Score	Residual Score	Status
HAZ-001	Patient misses urgent red flag symptom	16	8	Controlled
HAZ-002	Duplicate prescription issued	12	4	Controlled
HAZ-003	Prescription issued despite recorded allergy	15	5	Controlled
HAZ-004	Patient identity misattributed	12	4	Controlled
HAZ-005	Clinical record not updated in GP system	9	3	Controlled
HAZ-006	Video consultation fails mid-consultation	6	2	Controlled
HAZ-007	Unauthorised access to patient record	15	5	Controlled
HAZ-008	Data breach of patient identifiable data	20	8	Controlled
HAZ-009	Clinician session left unattended	9	3	Controlled
HAZ-010	Incorrect medication dose prescribed	12	4	Controlled
HAZ-011	Delayed response to urgent consultation request	8	4	Controlled
HAZ-012	Patient misunderstands AI clinician output	8	4	Controlled
HAZ-013	AI clinician hallucination of clinical information	12	4	Controlled
HAZ-014	AI clinician failure to recognise red flag symptoms	16	8	Controlled
HAZ-015	AI clinician inappropriate reassurance	12	4	Controlled
HAZ-016	AI clinician bias in clinical recommendations	8	4	Controlled
HAZ-017	AI clinician model drift	8	4	Controlled
HAZ-018	AI clinician output misinterpreted by clinician	8	4	Controlled

Test Results

Clinical Safety Test Summary

Test Area	Tests Run	Passed	Failed	Notes
Red flag symptom checker	24	24	0	All red flag scenarios correctly triggered
Duplicate prescription alert	12	12	0	Alert fired within 28-day window
Allergy alert	18	18	0	Including partial allergy matches
Session timeout	6	6	0	Timeout confirmed at 15 minutes
Two-factor authentication	10	10	0	SMS and app-based tested
Mandatory clinician review	8	8	0	Prescription blocked without review
Clinical record update	15	15	0	HL7 message confirmed received
Video consultation	20	19	1	One failure due to network timeout, resolved
AI clinician red flag detection	30	30	0	All red flag scenarios correctly escalated
AI clinician hallucination check	25	25	0	No fabricated clinical information detected

Test Environment

All tests were conducted in the Sonera Clinic staging environment, which mirrors the production environment. Test patient records were used throughout. No live patient data was used in testing.

Test Conclusions

All clinical safety tests passed with the exception of one video consultation failure, which was investigated and resolved. The platform is considered safe to proceed to release.

Incident Log

Clinical Safety Incidents

Incident ID	Date	Description	Severity	Status
INC-001	22 Apr 2026	Video consultation dropped mid-consultation for patient in rural area	Low	Resolved
INC-002	28 Apr 2026	Duplicate prescription alert fired incorrectly for different dose of same medication	Low	Resolved

Incident Trends

No trends requiring escalation have been identified. Both incidents were isolated events with no recurring pattern.

Lessons Learned

The video consultation failure highlighted the importance of testing in low-bandwidth conditions. The duplicate prescription alert was refined to distinguish between different strengths of the same medication.

Quality Assurance and Authorisation to Proceed / Release

Quality Assurance Statement

The Sonera Clinic platform has been developed and tested in accordance with the Sonera Clinic Quality Management System. All clinical safety activities have been completed as planned. The clinical risk management process has been followed throughout the development lifecycle.

Authorisation to Proceed / Release

Name	Role	Decision	Date
Dr Anna Kowalski	Medical Director	Approved	14 May 2026
Mr Tom Bradley	Clinical Safety Officer	Approved	14 May 2026

Reference Documents

Document	Reference	Location
Sonera Clinic Clinical Safety Management Plan	SCSMP-001	Sonera Clinic Quality Management System
Sonera Clinic Hazard Log	SCHL-001	Sonera Clinic Clinical Safety Folder
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Appendix A

Hazard log extract — see SCHL-001 for the full hazard log.

Appendix B

Test evidence — see Sonera Clinic Clinical Safety Folder for supporting test evidence.