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| Document filename: | **GP Connect Appointment Management Capability API Use Cases** |
| Project / Programme | **GP Connect** | Project | **GP Connect** |
| Document Reference |  |
| Project Manager | **Richard Phillips** | Status | **Published** |
| Owner |  | Version | **0.5** |
| Author | **Jackie Barnes**  | Version issue date | **17/05/2018** |

**GP Connect**

**Model Use Cases**

**Appointment Management Capability**

Document management

Revision History

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| Version | Date | Author | Summary of Changes |
| 0.1 | 10/11/17 | Jackie Barnes | Created more formal document to contain all Appt Mgmt API Use Cases |
| 0.2 | 11/4/18 | Jackie Barnes | Updated to reflect Capability version 1.1.0 |
| 0.3 | 3/5/18 | Jackie Barnes | Updated to map steps to corresponding Activity Diagram |
| 0.4 | 9/5/18 | Jackie Barnes | Updated to include Activity Diagrams |
| 0.5 | 17/5/18 | Jackie Barnes | Minor enhancements |

Reviewers

This document must be reviewed by the following people:

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| Reviewer name | Title / Responsibility | Date | Version |
| James Cox | GP Connect Lead Developer | 10/5/18 |  |
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## Introduction

This document defines a model of how the individual functional APIs within the GP Connect Foundations and Appointment Management Capabilities are used to achieve the end-to-end process of booking, amending or cancelling a patient appointment.

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| **Use Case** | **Book Appointment Using GP Connect APIs** | **Activity No.** |
| Actor | Consumer System End-UserGP Connect-enabled Consumer System - including Urgent Care SystemsGP Connect-enabled Provider System  |  |
| Trigger | Patient calls GP Appointment Service – Hub or Practice requesting an appointmentPatient calls Urgent Care 111 service and Call Centre Handler or Clinical Triage determines that a GP appointment should be booked for the patient | 1. |
| Pre-Conditions/Assumptions | GP Connect ‘Core’ requirements – general and technical - complianceA single use of a GP Connect API will target one organisation only as represented by ODS codeParticipating Appointment Booking (Consumer) and Hosting (Provider) Organisations configured as necessary on Spine - incl. GP-Connect enabled System endpoints configured on SDS Participating Organisations Data-Sharing agreement representation within Spine Security Proxy (SSP) Data-Sharing validation file Participating GP Practices have defined slots/sessions within their appointment book as bookable by GP Connect. The specification has additionally required Provider system end-user functionality to enable more granular control of external org appointment availability according to booking Organisation Type and/or local GP Practice defined Organisation groups and/or individual Organisations. This will support and represent local cross organisational - agreed policies and procedures re appointment services. | 17. |
| API Pre-Requisites | Consumer system traces patient’s NHS Number and determines GP Practices at which appointment can be booked via:* 1. Validates NHS number against PDS; patient’s GMS-registered practice can be obtained as part of PDS trace
	2. Builds list of selected Provider Organisations (known as ‘Service Search’ in other settings) offering appointments via option (i), (ii) or (iii) and displays to user nb **this is Consumer system functionality outside of scope of GP Connect**:
	3. Identify GP Organisations **within patient’s GMS-registered practice Federation** –
	4. Obtain Patient’s Preferred Branch Surgery via sending to Patient’s GMS-registered Practice:
	+ **GP Connect Find Patient** **API** using NHS number
	+ Provider returns Patient Resource with its system logical Patient ID, and including new element **preferredBranchSurgery** populated with ODS Site Code and location details
	1. Identify GP services **outside of registered practice federation area**

Eg Urgent Care consumer system Search UC Directory of Services (DoS) using **Patient’s geographical location for GP Practices providing services in vicinity** | 2.4. 5.3. |
| Main Flow | 1. Consumer End-User selects the organisation(s) to be targeted
2. Consumer system obtains **GP connect-enabled endpoints** (Provider systems) for selected Provider Organisation(s) ODS codes via SDS
3. Consumer system obtains date range from end-user and sends **GP Connect Search Free Slots API** to selected endpoints with appointment search filters:
	* date-range – max = 2-week horizon
	* organisation type = currently ‘GP Practice’ or ‘Urgent Care’
	* booking organisation ODS code
	* other optional search filters = eg UC Disposition Code, Service Id
4. Provider(s) system returns bundle resource including
	* Slots matching the time frame, and GP Connect and external organisation booking profile with free/busy status = free
	* mandatory elements = owning Schedule details, Slot status = free, Slot Start/End Date/Time
	* Practitioner(s) (optional) assigned to Slots: FHIR Mandatory elements = Name
	* Organisation(s) hosting slots: FHIR Mandatory elements = Name; Must Support = ODS Code
	* Location(s) – (mandatory) physical location of slots (ODS Site code): FHIR Mandatory elements = Name
5. Consumer system filters slots according to its functionality and displays so that end-user selects appropriate slot(s); the Preferred Branch Surgery, if already obtained, could be used here to enable UC consumer end-users to better identify slots at the Patient’s preferred branch surgery where available from Provider system
6. Consumer system determines Patient’s active record details against which to record appointment: if not previously obtained – Activity 3. - sends **GP Connect Find a Patient** **API** with NHS Number to the GP practice hosting the selected slot(s)
7. **Active Patient record found** - ie patient living and current ‘registration’ – eg GMS or temporary: Provider system returns the populated Patient resource
8. Consumer system sends **GP Connect Book Appointment API** with Appointment FHIR resource
	* Must provide: FHIR patient, Schedule, Location, Slot resources, start and end date/time, appointment status = ‘booked’; FHIR Slot resources
	* Should provide if obtained via Search Free Slots: FHIR Practitioner
9. Provider system processes appointment booking according to its existing appointment booking functionality and returns Appointment Booking confirmation message with populated FHIR Appointment resource
10. This MAY include a business identifier to allow an individual appointment to be uniquely identifiable for future use – UC requirement
11. Consumer system displays the confirmation
 | 6.7.8. 9.10.11. 12.14.15. 16. |
| Alternate Flows | g-alt) **Active Patient record not found**: Patient Resource is returned empty –so patient record needs to be created/re-activated* 1. Consumer system sends **GP Connect Register a Patient API** but registrationDetails shall not be populated
		+ Specification Mandatory = NHS Number, DOB
		+ FHIR Must Support = Patient ‘Official’ Name, Gender
1. Provider system performs PDS trace, and creates/reactivates patient record; returns populated Patient resource, containing details of the new temporary-registered or re-activated patient with registrationType= a value from the valueset which matches the registration type used within the provider system. If an appropriate registration type is not available within the valueset then the Other type should be use and more detail around the specific type of registration can be added using the “text” element of the CodeableConcept.
 | 13. |



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| **Use Case** | **Amend/Cancel Patient Appointment Using GP Connect APIs** | **Activity No.** |
| Actor | Consumer System End-UserGP Connect-enabled Consumer System - including Urgent Care SystemsGP Connect-enabled Provider System  |  |
| Trigger | Patient calls Hub, GP Practice, or 111 Service to cancel or amend a future appointment Patient calls GP Appointment Service to book an appointment, and an existing future appointment needs to be cancelled as a result. |  |
| Pre-Conditions/Assumptions | GP Connect ‘Core’ requirements – general and technical - complianceA single use of a GP Connect API will target one organisation only as represented by ODS codeParticipating Appointment Booking (Consumer) and Hosting (Provider) Organisations configured as necessary on Spine - incl. GP-Connect enabled System endpoints configured on SDS Participating Organisations Data-Sharing agreement representation within Spine Security Proxy (SSP) Data-Sharing validation file  |  |
| API Pre-Requisites | Consumer system validates NHS number against PDS; patient’s GMS-registered practice can be obtained as part of PDS traceConsumer system end-user determines appointment-hosting (Provider) organisation(s) | 2.3. |
| Main Flow | 1. Consumer system obtains **gp connect-enabled endpoint** (Provider system) for selected Provider Organisation ODS code via SDS
2. Consumer system sends **GP Connect Find a Patient API** to selected endpoint to confirm that a patient record exists at that organisation
3. Patient Record exists (otherwise Consumer System processing for ‘Patient Not Found’): Provider(s) system returns populated Patient FHIR Resource
4. Consumer system sends **GP Connect Retrieve a Patient’s Appointments API** with start and end date parameters – start date equal or later than today;

if specific local Appointment identifier is not known, otherwise (if stored from previous interaction), sends **Read Patient Appointment** **API**1. Provider returns appointment(s) and Consumer Displays
2. Consumer sends **GP Connect Amend of Cancel Patient Appointment API**
	1. Only Appointment Description and/or Comment element are amendable
3. Provider processes request and returns Appointment Amendment/Cancellation confirmation message with populated FHIR Appointment resource
	1. Provider releases cancelled appointment and makes available
4. Consumer displays confirmation
 | 4. 5.6.7.8.9. 10.11. 12.13.14. |

