Michael's Story

Use Case for INTEROPen's FHIR demonstrator work

1. Michael's Journey
2. Multiple Care Domains
3. Care Professionals
4. System Tools
5. Domains
6. FHIR Profiles

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Michael's Journey - Summary

Michael

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- Michael is a 58-year-old living alone.
- He suffers from anxiety attacks, has poorly managed diabetes requiring insulin. He drinks excessively.
- His mental health team intervene when Michael's anxiety is mistaken as aggression.
- The Diabetic specialist, supported by primary and community care and the local pharmacist, implement a plan to improve Michaels medication conformance.
- Without medical support, Michael decides to stop drinking, resulting in a visit to OOHs, where he has a seizure.
- Taken by ambulance to A&E, Michael is admitted to THE Acute Medical Unit. The Ward Sister updates the consultant on the medication Michael has taken, before implementing their alcohol withdrawal protocol.
- Due to severe hallucinations a psychiatric assessment is requested before discharge, with a request to link in with the community mental health team, to ensure Michael receives ongoing care in the community.
- The discharge team are made aware of Michael's history and domestic circumstances to ensure safe discharge and handover back to primary care GP and community nurse to review his foot ulcer.
- LFT's show potential liver damage, Michael is referred to an outpatient liver clinic and agrees to enrol on a liver study.
- A Social Care referral is triggered as there are concerns about Michaels finances and living conditions.
- Patients apps are used to support to Michael in relation to his medication conformance and lifestyle.

Michael's Journey – Care Domains

Anxiety	Community Mental Health Team GP Practice Accident & Emergency
Diabetes	GP practice Community Nurse Diabetic Outpatient Clinic Community Pharmacy
 Michael	
Alcohol Withdrawal	Out of Hours Ambulance Service Accident & Emergency Inpatient (Medical Assessment Unit) Discharge team Psychiatric Liaison Out Patient & social care
Liver Disease	Outpatients Clinic GP Practice
Family Support & Self-Care	Telehealth Solutions On-line Patient Access

Michael's Journey – System Users

Michael

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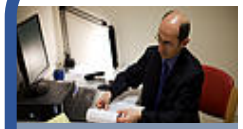
In order to play my part in Michaels care, I need to:-

Mrs Banerjee MHT

- Access Michael's record
- View Prescribing history
- Push out special alert to all Michael's other health records



Outpatients Dr Singh

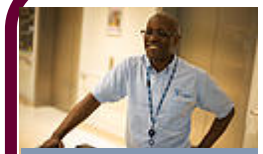
- Access Michael's record from primary care; outpatients & pharmacy.
- View a graphical correlation of data in relation to HBA1C results; medication history; blood sugar, weight and encounters.
- Send electronic referral to community pharmacy
- Enrol Michael on Telehealth scheme

Jacky Ward Sister

- Access Michael's existing records
- Pull relevant data to create Medical Admissions Unit record
- Create medicines management list for duration of hospital stay and TTO's
- Send task to discharge team & Mental Health liaison to attend the ward
- Send note to all other HCPs to alert them that Michael is on the ward
- Create appointment into Liver specialist clinic and Social Care referral.

Dr Lowndes Liver Specialist

- Access Michaels record from in-patients; primary care & Mental Health
- Venlafaxine & Liver Disease - Caution
- Review prescribing history
- Alert MHT of this encounter and decisions regarding prescribing.
- Enrol Michael on Telehealth scheme



GP Practice

- Co-ordinate all the resources and services available to Michael.

To do this I need to receive real time relevant data from all sources.

Michael

- Access patient on-line services to book appointments & order prescriptions
- Access telehealth services to prompt me to eat and medicate. in line with my care plan
- Share daily measurements with my clinicians
- Access patient information and on-line help
- Share information about me with my family and carer.

To achieve this my system must allow me to-

Michael

Mrs. Banerjee (Community Mental Health)

- Access record & prescribing history
- Push out alert to **all** other HCP records

Dr Singh (Diabetic Shared Care)

- Pull; Review; Incorporate relevant data from other HCP's
- View graphical correlation of data
- Send electronic referral to pharmacy
- Enroll Michael in Telehealth scheme

Jacky (Ward Sister)

- Find "who else is involved in this patient's care?"
- Pull; Review; Incorporate relevant data from other HCP's
- Integrate existing meds to begin my prescribing record
- Alert all teams re inpatient status
- Send task to Discharge & Psychiatric teams
- Create appointment for Liver Clinic & Social Care Referral
- Alert all teams on discharge and point to summary

Dr Lowndes (Liver specialist)

- Pull; Review; Incorporate relevant data from other HCP's
- Alert all teams re encounter & prescribing

Family Support & Self-Care

- Access to on-line patient services
- See & contribute to my record (telehealth)

One To Many Domains

Michael

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- GP Practice
- Community Nurse
- Community Pharmacy
- Out of Hours
- Ambulance Service
- Psychiatric Liaison
- Accident & Emergency
- Social care
- Out Patient
- Discharge team

- **Community Mental Health**
  - Access record & prescribing history
  - Push out alert to **all** other HCP records
- **Diabetic Shared Care**
  - Pull; Review; Incorporate relevant data from other HCP's
  - View graphical correlation of data
  - Send electronic referral to pharmacy
  - Enroll Michael in Telehealth scheme
- **In Patients**
  - Find "who else is involved in this patient's care?"
  - Pull; Review; Incorporate relevant data from other HCP's
  - Integrate existing meds to begin my prescribing record
  - Alert all teams re inpatient status
  - Send task to Discharge & Psychiatric teams
  - Create appointment for Liver Clinic & Social Care Referral
  - Alert all teams on discharge and point to summary
- **Out Patients**
  - Pull; Review; Incorporate relevant data from other HCP's
  - Alert all teams re encounter & prescribing
- **Family & Patient**
  - Access to on-line patient services
  - See & contribute to my record (telehealth)

Michael's Journey – Mobilising the data

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Phase 1 FHIR PROFILES

Michael

- Problems/Conditions
- Medications
- Observations/Vital Signs
- Procedures
- Immunisations
- Encounters (Consultations)
- Tasks and Notes
- Appointments
- ERS/Non ERS Referrals