A nurse-delivered, technology-enabled HIV outpatient pathway

Presented on behalf of the core Klick team:
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2017: Concept of Klick was developed during an innovation sprint between Chelsea and Westminster Hospital NHS Foundation Trust (CWFT) and ViiV Healthcare. The sprint aim was to design a new sustainable model of care for the management of people living with HIV (PLWH).

2018/19: Proof of concept was successfully piloted in Kobler outpatient clinic, CWFT (n=92) as part of a joint working initiative with Viiv Healthcare/CWFT, with technical support from Avegen, a company specialising in digital healthcare.

2020: The model was adapted using the pilot learnings and named Klick, and was launched at Kobler Clinic in August 2020 and then 56 Dean Street in July 2021.
Klick was designed with a focus on:

• **Patient Empowerment**: Involving PLWH in their care

• **Annual Health Review**: In line with current national guidance (as per BHIVA and NHIVNA guidance)

• **Nurse-led clinics**: increased work-satisfaction and retention to work model, opportunities for development

• **Digital solutions**: Enhancing the service model, cost-effective, patient-centred care
Enabling nurse (Band 6/7) delivered care

- Working as part of a consultant-led team
- Allocated senior medical supervisor per session
  Pre and post-clinic discussion with supervisor
- HealthMachine’s medical proforma guides the virtual consultation
- NHIVNA/STIF certification / competencies
- Ongoing programme of educational training delivered by MDT
PLWH use a **smartphone application** to access HIV care and engage with **nurse-delivered virtual consultations** that are facilitated by a clinic facing web-based platform **HealthMachine™**.
Patient-facing Klick app features

Manage Klick appointments (book/reschedule/cancel)
Appointment reminders

Submit pre-visit questionnaire (PVQ) to guide discussion at consultation

View routine blood results with interpretation after release by clinical team

Receive secure care notifications from the clinical team via push notifications
Results released/published on app via Health Machine

Clinician can verify patient has viewed notification/results

Worklists & alerts ensure results released on time
Your Hep B test was negative

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Test date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B DNA</td>
<td>&lt;10 copies/mL</td>
<td>30-May-2022</td>
</tr>
</tbody>
</table>

**Hepatitis C: Normal / No action required**

You tested negative for Hepatitis C.

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Test date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis C antibody</td>
<td>Not detected</td>
<td>27-May-2022</td>
</tr>
</tbody>
</table>

**Additional comments**

Dear xxxx, It was good to see you in clinic last week. Your liver function has now normalised. You are however, anaemic which may partly explain why you have been feeling a little tired. I’ve written to your GP to see if they can help optimise your diabetes and investigate why you are anaemic. Sometimes anaemia can be due to a diet low in iron or vitamins so this too may need reviewing. Unless you have difficulty accessing your GP for these issues I’ll see you in six months, Best Sara Day.
PVQ

Medical proforma

doubles up as GP letter

pre populated

nurse prompts
Medical Proforma

Patient Profile:
- Past medical history
- Concurrent medication
- Possible problems/side effects

Wellbeing_1:
- Alcohol and RDU
- Biometric data
- Mood and support

Wellbeing_2:
- Sexual Health
- Women’s Health
- Vaccinations

- Consultation
  - GP letter
Tools we use during consultation

- FRAX score: https://www.sheffield.ac.uk/FRA
  X/tool.aspx
- QRisk3: https://qrisk.org/three/index.php/
- FAST Scoring: https://assets.publishing.service.
gov.uk/government/uploads/syst
em/uploads/attachment_data/fil
e/684828/Fast_alcohol_use_scre
ening_test__FAST__.pdf/
- Liverpool University DDIs: https://www.hiv-
druginteractions.org/checker
- PHQ-9 Depression: https://patient.info/doctor/patien
t-health-questionnaire-phq-9
- GAD-7 Anxiety: https://patient.info/doctor/ge
  neralised-anxiety-disorder-assessment-gad-7
Case Study

• JB, 57 y.o. man, well controlled HIV

• Co-morbidities/PMH:
  SOB
  Diarrhoea (chronic?)
  Abdominal bloating,
  Splenic vein thrombosis ranging from SMV to IMV
  Basal Cell carcinoma - 4 removals
  Shingles
  CT CACS (2021): 54 AU
  BMD: Osteopenia (2017)

• Co-medications: Atorvastatin 10mg, acyclovir

• Consultation:
  F: New 6 month prescription
  F: F2F appointment with Prof Nelson
  F: Mental Health/HIV CNS and Peer Support referral
  F: Urgent referral to Haematology (splenic vein thrombosis)
  F: Urgent referral to Dermatology (4 basal cell carcinomas - LFU)
Patient Survey 2021 - service descriptors

Professional  Excellent  Efficient  convenient  Good  Happy  Easy  Quick  Easy  Efficient  Better  Convenient  impersonal  Easy  results  Reassuring
Klick demonstrated 84% reduction in DNA rates compared to the mainstream Kobler clinic during the same period.
Evaluation

- Online surveys x 2 via Survey Monkey
- One-to-one qualitative patient interviews
- Clinical audit using BHIVA monitoring guideline
Patient Survey 2019

91% Overall patient satisfaction

84% Wanted to continue the same care pathway

93% Technology Were positive about technology playing a role in their care

77% Patients happy to have a routine consultation with a nurse instead of regular Dr/ANP

96% Felt their needs were fully/mostly met:
- Addressed medical needs
- Felt listened to
- Sufficient time to ask questions
- Info provided in an understandable format
- Felt fully involved in decisions about their care.
Patients reported high satisfaction with the service overall

“Fast, efficient, convenient. Much better than being on telephone hold for 30-minutes. Frees up staff to do other things”

“Was a pretty seamless experience”

“Smart and confidential”

Patients felt in control

“I feel in control and empowered to take part in my care”

Patients appreciated user-focused technology

“Very user friendly application, focusing not only around healthcare professionals’ safety but most importantly focusing on patient quality of care”

Most patients wanted the option of virtual consultations

90%
Positive experience booking appointments

70%
Patients use multiple features of the app

77%
Klick superior or more preferable than previous booking system

>80%
Rate all core features as extremely important or important
Patient Survey 2021 – Nurse-led Consultations

How would you rate your experience of the Annual Review consultation with an experienced nurse?

Answered: 85  Skipped: 23

>50% felt the level of care provided by the nurse consultation was superior or preferable to the mainstream/historic service

85%  Strongly positive or positive experience

“There was plenty of time to go through each item and there was not the feeling of holding up a doctor from seeing another patient.”

“I would be happy to have Annual Review consultation with Nurse, but wish to have this particular one with Consultant as I want to discuss changing treatment.”
Clinical Audit - Comparing Klick Pilot to National BHIVA Audit (2018)

- CVD Risk
- Fracture Risk
- Sexual Health Screening
- Mental Health / Mood
- Smoking Status
- Vaccination - Influenza
- Vaccination - Pneumococcal

National BHIVA Audit (2018), n=4852
Pilot Service, n=92
Clinical Audit 07-08/2022 compared to National BHIVA Audit (2018)
Challenges facing our outpatient services - did we address them?

**QUALITY**

Expanding complex cohort creating resource pressures; poor results governance; suboptimal BHIVA audit findings

Response: Klick releases consultant expertise to manage complexity; BHIVA audit standards met; improved results governance

**MODEL OF CARE**

Consultant delivered care; multiple IT systems housing requisite data; face to face consultations; limited nurse development opportunities

Response: Nurses manage stable cohort within consultant-led MDT; standardised AR medical proforma houses auditable requisite data; virtual consultations; STIF/NHIVNA certification

**SUITABILITY OF SERVICE FOR PATIENTS**

PLWH want convenient care that fits with their lifestyles; long waiting times for consultants or call centre; limited ability to inform service development

Response: PLWH have ownership over appointments and influence their consultations via PVQ; secure and verifiable communication portal with clinic; insights have informed future iterations
Developments (live in next three months)

- Phased scale up: 10 HB, West Middlesex (Sexual Health Hounslow), Harlow, Watford and Stevenage
- Injectable ARV appointments: aid adherence to strict requirements, “Book your appt” prompts, appt reminders
- Content Library within app: trusted and supportive resources, clinical questionnaires, surveys
- Fuller evaluation – 3rd survey, BHIVA audit, patient interviews
- Bulk push notifications e.g. Monkeypox, service iterations
- Emergency prescription requests for ARVs
- More complex integration to enable offering other appointment types – eg specific clinician
Thanks to everyone who has contributed to Klick...

**Kobler Clinic**
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**ViiV Healthcare Team**
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**56 Dean Street**
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Joe Phillips
Alex Harvey
Klick Nursing Team
Admin Support
Jon Clarke

**Avegen Team**
Nayan Kalnad and the rest of the team

Everyone by name:

Special thanks to our patients who have embraced Klick
Special thanks

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• To **Becki Wilkins** and **Yodit Fissahaye–Yimer** for training me and signing me off, for all their support