The cascade of care for children and adolescents with HIV in the UK and Ireland in 2015

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UNAIDS target for 2020
Cascade of care: 90-90-90 targets for 2020

- 90% of individuals with HIV know their status
- 90% of those diagnosed on antiretroviral treatment (ART)
- 90% of those on treatment are virally suppressed

UNAIDS, Ending AIDS: Progress towards 90-90-90, 2017
Cascade of care: 90-90-90 targets for 2020

- Global cascade estimates for 2016:\(^1\):
  - 90% of individuals with HIV know their status: 70%
  - 90% of those diagnosed on ART: 77%
  - 90% of those on treatment virally suppressed: 82%

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UNAIDS, Ending AIDS: Progress towards 90-90-90, 2017
UK HIV continuum of care: progress against UNAIDS targets

Virally suppressed < 200 copies/mL.

Source: V Delpech, IAS 2017
ART coverage and VL suppression among heterosexual Black African women by age group: United Kingdom 2014

VL suppression: having the most recent VL undetectable (VL<200 copies/ml)
ART coverage and VL suppression among heterosexual Black African women by age group: United Kingdom 2014

- Adolescents/Young adults (15-24) do worse, in particular in some key populations.
- How is the cascade of care in children and adolescents in paediatric HIV care?

VL suppression: having the most recent VL undetectable (VL<200 copies/ml)
CHIPS: national cohort of patients in paediatric HIV care in UK & Ireland

Paediatric HIV Clinic: annual follow-up form

2133 ever in CHIPS
Half transferred to adult care

http://www.chipscohort.ac.uk
Adapted Cascade of Care in 2015

**Design:** Cross sectional approach using longitudinal data

**Inclusion criteria:** age <21 years and not known to have died, left the country, transferred to adult care or lost-to-follow-up as of 1\textsuperscript{st} Jan 2015.

We describe:

- Among those diagnosed, % in active care (≥1 record of clinic visit)
- Among those in active care, % on any ART at last visit
- Among those on ART, % virally suppressed (VL≤400 copies/mL) at last visit
- Among those on ART, % with good immune status at last visit*

*WHO 2007 immune stage none/mild: CD4>30% for <1 yr, CD4>25% for 1-3 yrs, CD4>20% for 3-5 yrs, CD4>350cells/mm\textsuperscript{3} for ≥5 yrs.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Overall (N=984) n (%) or median [IQR]</th>
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<tbody>
<tr>
<td>Female</td>
<td>520 (53%)</td>
</tr>
<tr>
<td>Born abroad</td>
<td>512 (52%)</td>
</tr>
<tr>
<td>Previously diagnosed abroad</td>
<td>138 (27%)</td>
</tr>
<tr>
<td>Age at diagnosis in UK, years</td>
<td>3.7 [0.9, 7.7]</td>
</tr>
<tr>
<td>Mode of infection: vertical</td>
<td>937 (97%)</td>
</tr>
</tbody>
</table>
Living with HIV | Diagnosed with HIV (In CHIPS) | In active care | On ART | VL≤400 cps/mL

95% | 90% | 95% | 87% | 77%

88% VL <200cps
80% VL <50cps
Cascade of care in paediatric HIV 2015

- Living with HIV: 90%
- Diagnosed with HIV (In CHIPS): 95%
- In active care: 81%
- On ART: 73%
- VL≤400 cps/mL: 95%
- Good CD4 status: 77%

Median CD4: 714 cells [IQR, 540-974] among >5yrs
In active care:
- <5 years (n=35; 4%)
- 5-<10 years (n=151; 15%)
- 10-<15 years (n=402; 41%)
- ≥15 years (n=396; 40%)

P-values:
- P=0.001
- P=0.233
- P=0.001
- P<0.001

On ART:
- 92%
- 93%

VL≤400 cps/mL:
- 87%

Good CD4 status:
- 90%
- No effect of sex
- Patients born abroad were less likely to be in active care (93% vs 97%, p=0.002), and less likely to be virologically suppressed on ART (85% vs 91%, p=0.007)
Conclusions

• In 2015, 87% of all children/adolescents diagnosed with HIV in the UK/Ireland were on ART and 91% of those on ART were virologically suppressed.

• Some variation by age group and place of birth; those ≥15 years and those born abroad had slightly poorer outcomes, though generally still above 90%.

• Limitations: difficult to estimate number living with HIV.

• Ongoing work on cascade of care post-transfer to adult care.
UPDATE: Extending CHIPS to CHIPS+

Aims:

- To establish a paediatric-adult cohort study of perinatally HIV infected patients ever followed in CHIPS → CHIPS+

- Assess long term outcomes through adulthood

- Annual follow up form: CD4, VL, ART history, hospitalisation, pregnancy, CDC stage, serious non AIDS events

- Inclusion criteria: Age ≥15 years; ever received HIV care in a paediatric clinic in the UK/Ireland

- Requires consent at age ≥15 years

>> Ethics approval in the UK, in process for Ireland
Moving on to CHIPS+

Data linkage:
- PHE
- NHS Digital

Paediatric HIV Clinic

Adolescent HIV Clinic

CHIPS: Annual follow up paediatric care

Consent

CHIPS+: Continue follow up in adult care
Moving on to CHIPS+

Paediatric HIV Clinic

Adolescent HIV Clinic

Adult HIV Clinic

Data linkage:
• PHE
• NHS Digital

• 7 clinics open, further 12 UK clinics have R&D approval
• Kate Sturgeon is contacting/visiting clinics
• For information contact: <mrcctu.chipsplus@ucl.ac.uk>
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