**The Recent Infection Testing Algorithm (RITA)**

1. **What is RITA?**
   The Recent Infection Testing Algorithm (RITA) programme was introduced in 2009 in England, Wales and Northern Ireland and involves the surveillance of recently acquired HIV infections among persons diagnosed using a biomarker assay. These data are incorporated into an algorithm including information on CD4 cell counts, ARV treatment and the diagnosis of an AIDS defining illness for final classifications of recent/incident or long-standing infections.

2. **What is being measured?**
   Key outputs from RITA are the number and proportion of newly diagnosed individuals with a likely recent/incident HIV infection in England, Wales and Northern Ireland by age, sex, probable route of HIV transmission, ethnicity and PHE region.

3. **Why is it being measured?**
   Timely data from RITA provide essential information on the changing profile of people affected by diagnosed incident HIV infections for public health monitoring, prevention monitoring and the commissioning of HIV-related services.

4. **How is the indicator defined?**
   Specimens from individuals newly diagnosed with HIV are sent by laboratories to the Virus Reference Department at PHE Colindale for recent infection testing using the AxSYM avidity assay. Results are linked to reports of new HIV diagnoses in the HIV AIDS and Deaths (HAND) Database. New HIV diagnoses linked to an avidity score of <0.8 are classified as recently acquired/incident infections unless other clinical information indicate a longstanding infection such as a CD4 count < 200 cells/mm³ (sourced from the CD4 surveillance scheme) or the report of an AIDS defining illness. In addition, cases are reclassified if the individual was on ARV treatment before or at the time the sample was taken (data sourced from the SOPHID (Survey of Prevalent HIV Infections Diagnosed) surveillance scheme).

5. **Who does it measure?**
   All individuals newly diagnosed with HIV for which specimens are sent for testing.

6. **When does it measure it?**
   The data are processed annually covering diagnoses from January to December the previous year. **Please note:** Annual outputs can be accessed through the PHE website. Or please contact [HARSQueries@phe.gov.uk](mailto:HARSQueries@phe.gov.uk).

7. **Will it measure absolute numbers or proportions?**
   Results can be presented in absolute numbers and proportions.

8. **Where do the data come from?**
   The demographic and clinical data stem from PHE’s HIV/STI surveillances schemes including the HIV, AIDS and Deaths (HAND) Database, the Survey of Prevalent HIV Infections Diagnosed (SOPHID), and the CD4 surveillance scheme. The Virus Reference Department at PHE Colindale provide the test result data.

9. **How accurate and complete are the data?**
   In 2011, with the programme is in its third year, testing coverage was 50%.

   Ninety percent of the test result data were successfully linked to a new HIV diagnosis report, for each of the three years.

   Essential variables (patient identifiers, risk for HIV and assay results) are 100% complete and major variables (e.g. CD4 count) are over 80% complete.

   It is estimated that 90% of all infections classified as recent were acquired in the previous 12 months and 60% of these were acquired in the previous 6 months.

10. **Are there any known caveats/problems/weaknesses within the data?**
    The performance characteristics of the assay are not well defined; the window period is a population mean estimated in a non-UK population.

11. **Are particular tests needed?**
    No standardisation required.

Data availability
   Website – RITA data tables are presented at national level by risk groups and age.

   Anonymised disaggregate data are produced for each SHA and published on the secure PHE web portal made only available to Regional Epidemiologists at each of the SHAs in England and to appropriate contacts in Wales and Northern Ireland.
Data requests – any analyses that are not already available via other means will be undertaken by the RITA team providing there are no disclosure issues and the time required to produce the data can be justified by its usefulness.

<table>
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<tr>
<th>12 Frequency of data updates</th>
<th>Annual update</th>
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<td>13 Indicator lay summary</td>
<td>In 2011, 16% of people newly diagnosed had recently acquired their HIV infection. The proportion of recent infection was higher among MSM (23%; 350/1,500), compared to heterosexual men (8%; 50/550) and women (8%; 60/770). The proportion of likely recent infections among people newly diagnosed varied with age; one in four (28%; 220/800) newly diagnosed MSM aged under 35 years were recently infected, compared to 15% (20/130) among MSM aged over 50 years. The highest proportions of likely recent infections among heterosexuals were observed among women (21%; 20/80) and men (14%; 3/20) aged 15-24 years. In contrast, less than 6% (40/590) of newly diagnosed heterosexuals aged 35-49 years had probably acquired their HIV infection recently.</td>
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**RITA resources**

For information and guidance on using RITA for the monitoring of recently acquired HIV infections, please access the following links.


National Public Health Monitoring of Incident HIV-1 Infections and Primary Drug Resistance: Laboratory Protocol

PHE Microbiology request form (S3 HIV Reference Test)

Summary of RITA test report

Newly Diagnosed Patients– Patient Information Sheet

HIV Incidence Surveillance – Healthcare Worker Fact Sheet

**References**


- Anderson ER, Taegtmeyer M, Gilbart VL, Chawla A, Delpech V. Tests of recent infection in clinical practice – the patient perspective. BASHH 2012 Spring Meeting, Brighton