Metro Public Health Dept
Nashville / Davidson County
Protecting, Improving, and Sustaining Health

Hepatitis A Virus Genotype Information and Testing

There are 6 Hepatitis A virus (HAV) genotypes but only genotypes I, II and III infect humans. HAV genotypes I, II and III are further divided into subtypes A and B.

Geographic distribution of Genotypes and Subtypes:

- HAV genotype I is the most common genotype occurring around the world
  - HAV genotype IA is prevalent in South and North America, Europe, Asia and Africa
  - HAV genotype IB is predominant in the Middle East and South Africa
- HAV genotype II is not as common
- HAV genotype III is common around the world
  - HAV genotype IIIA circulates in Asia, Europe, Madagascar and the USA.

Clinical implications of different HAV genotypes:

Clinical presentation of the different genotypes is the same. However, HAV genotype IB occurs more frequently among acute liver failure cases indicating potentially greater virulence. Host factors such as patient age, underlying liver diseases and viral factors (HAV RNA levels and genomic mutations) were associated with disease severity.

Hepatitis A genotype establishes transmission in an outbreak:

Genotyping can determine the genetic identity of the HAV sequences in an outbreak. HAV genome sequence differences in the VP1-P2A junction are used to identify the various sub-genotypes along with evaluating similarities in genetic sequence from the specimen samples. Genotyping may identify the common source of infection during the outbreak, especially when compared with epidemiologic data.

In case of questions or clarifications, please contact the Metropolitan Public Health Department of Nashville & Davidson County at 615 340-0408.