**Session:**speaker  
**Student:** N  
**Title:** Introducing R/Tidyverse to Clinical Statistical Programming  
**Track Title:** Visualization/Programming/RWE  
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**Presenter:** Freeman Wang  
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**Abstract:**   
The Tidyverse is a coherent system of packages for data manipulation, exploration and visualization that share a common design philosophy. This talk will introduce the core concepts of tidy data, tidy programming API (functions and the pipe syntax), and tidy statistics, and reveal the reasons why it makes statisticians and data scientists more productive. In my opinion, the major reason for the popularity of Tidyverse, is not about the good-looking plots, or the fancy and handy manipulation functions, but about content-driven and communication-focused workflow, which concisely expresses human logic as R code, and seamlessly aligns multiple layers of objective, programming, and output logic. In general, Tidyverse tends to shorten the distance from questions to answers. This talk will demonstrate Tidyverse workflow (importing, tidying, visualizing, modeling) through clinical, bio-marker, and statistical programming examples.