

The Changing Dynamics of Hospitalizations among People Living with HIV over Time

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BACKGROUND

- As antiretroviral therapy for HIV has become more successful, people living with HIV (PLWH) are aging.
- Nearly half (48%) of all PLWH in the U.S. are now ≥ 50 years old, and this proportion is expected to continue to grow.
- The aging population of PLWH offers new challenges to the healthcare system beyond HIV management, with increased risks for chronic comorbidities and other complications of aging.
- This project focuses on the causes and outcomes of hospitalizations among PLWH and how these diagnoses have changed over time.

METHODS

We queried patient data from the Healthcare Cost and Utilization Project (HCUP) from the Nationwide Inpatient Sample (NIS) database from 1993 to 2014 to evaluate the primary admission diagnosis for PLWH compared to HIV-negative patients. The NIS is a "large publicly available all-payer inpatient healthcare database designed to produce U.S. regional and national estimates of inpatient utilization, access, charges, quality, and outcomes." www.hcup-us.ahrq.gov

RESULTS

Figure 1. Trends in Mean Age of PLWH and HIV-Negative Admissions from 1993 – 2014

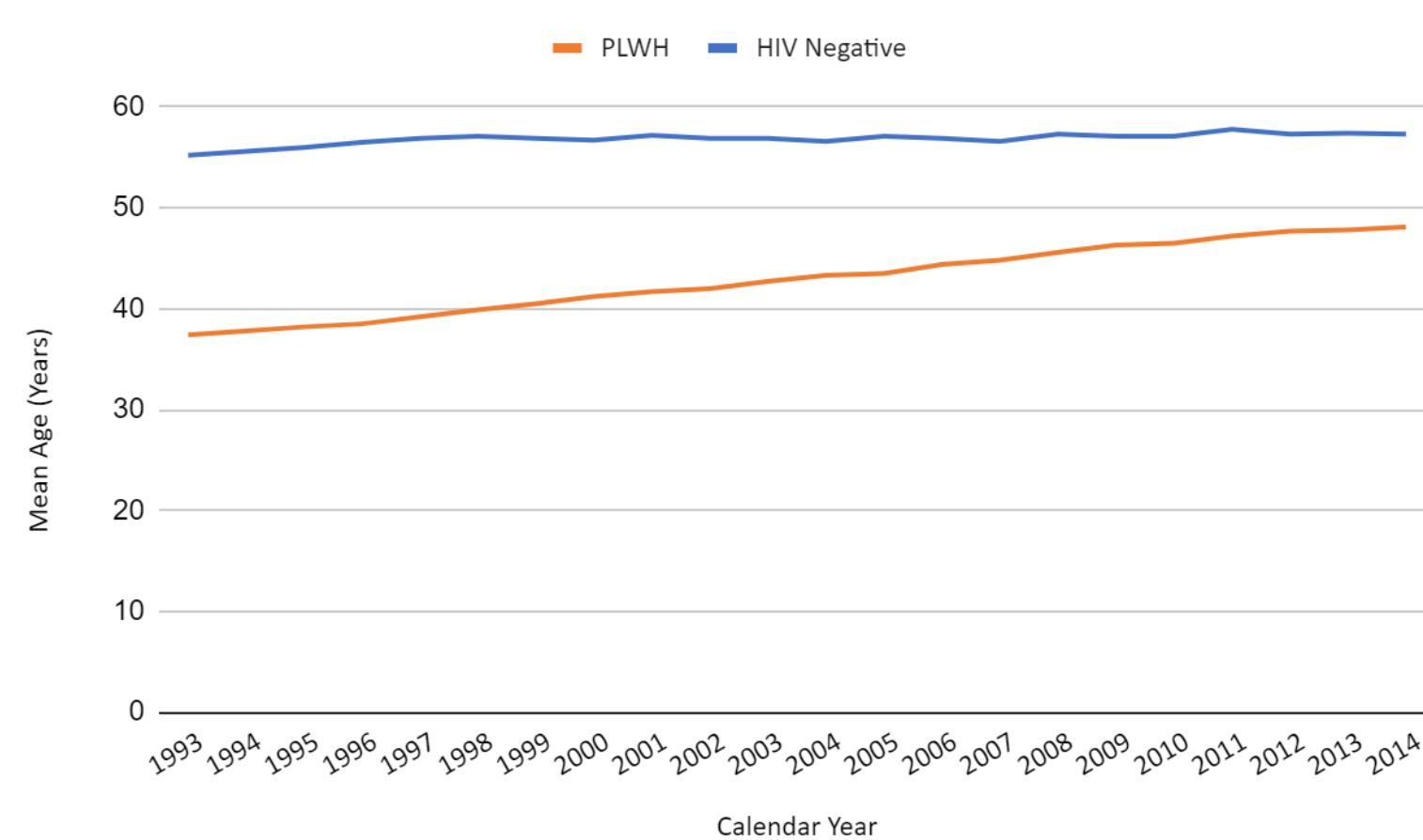
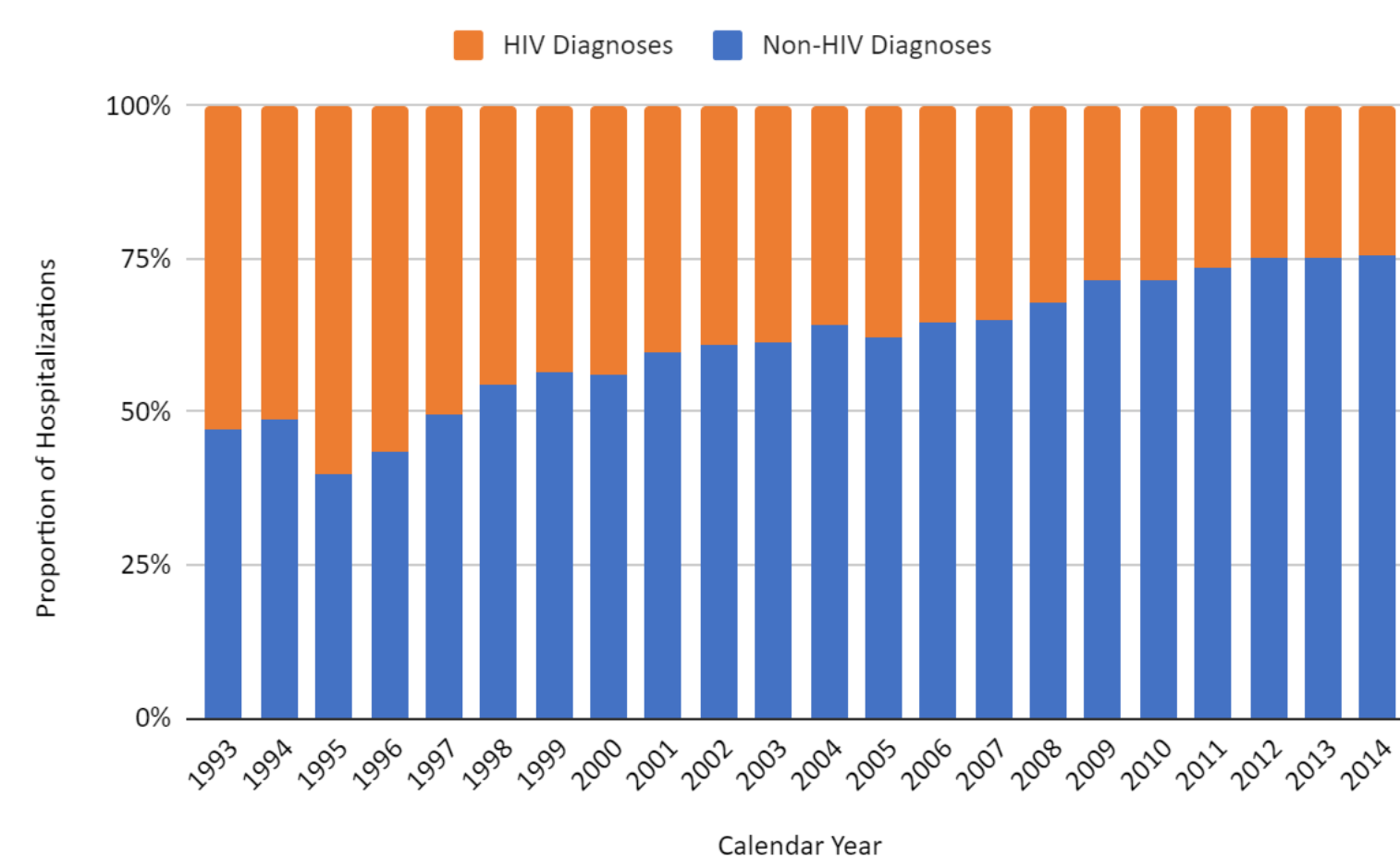


Figure 2. Trends of HIV vs. non-HIV as the Primary Admission Diagnoses in PLWH from 1993 – 2014



- 654,783,064 hospitalizations were recorded from 1993 - 2014, with 5,370,749 among PLWH (0.8%) and 649,412,315 among HIV-negative patients (99.2%).
- The mean age of PLWH on admission increased from 37.4 years in 1993 to 48.1 years in 2014 and was lower than HIV-negative patients every year (Figure 1).
- The proportion of PLWH who died during hospitalization declined from a peak of 8.8% in 1993 to 2.4% in 2014 while inpatient mortality among HIV-negative patients declined from 3.2% to 2.2% over the same time.

Figure 3. Trends of Length of Hospital Admission and Total Charges for PLWH and HIV-Negative Patients between 1993 – 2014

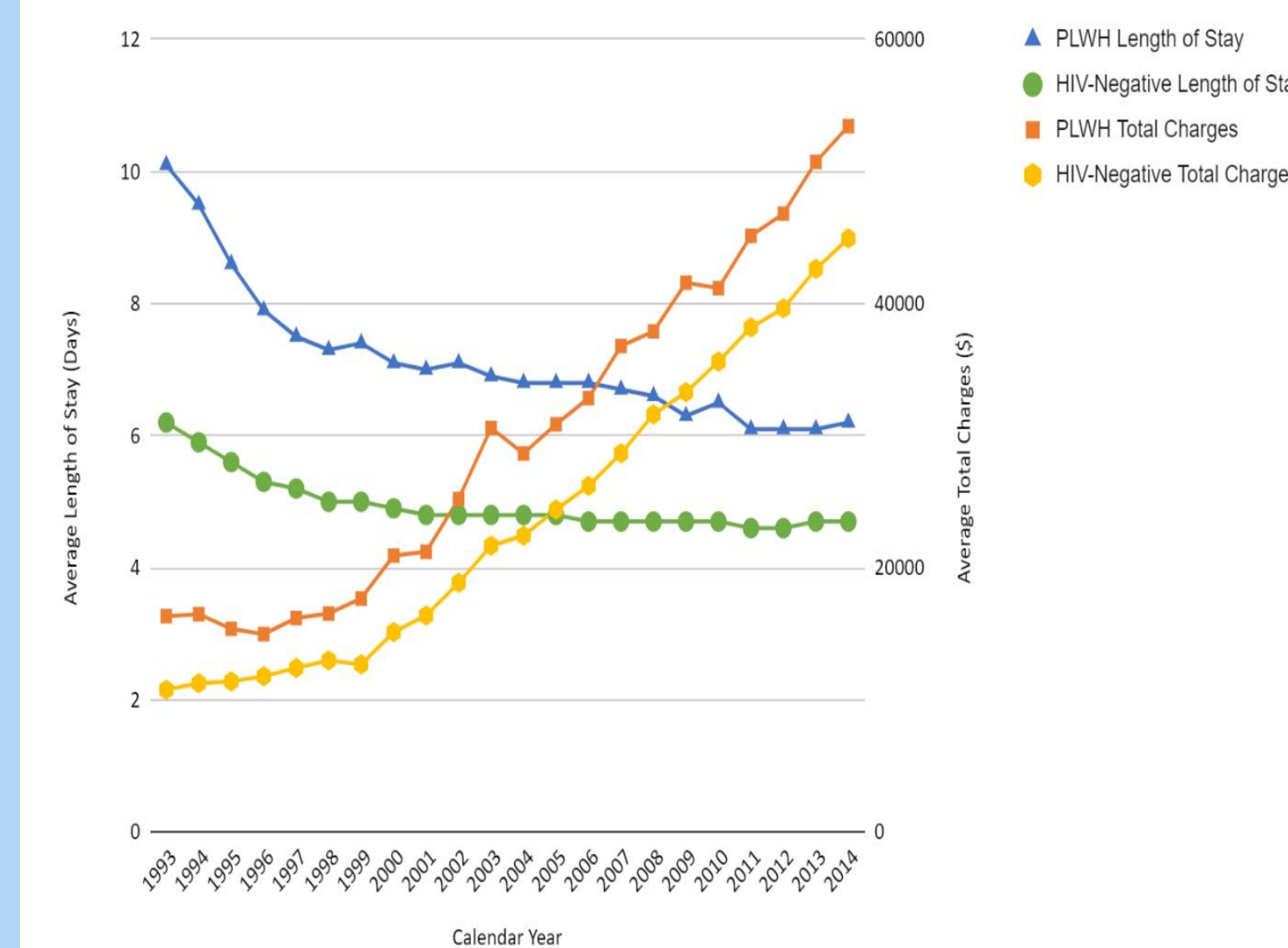
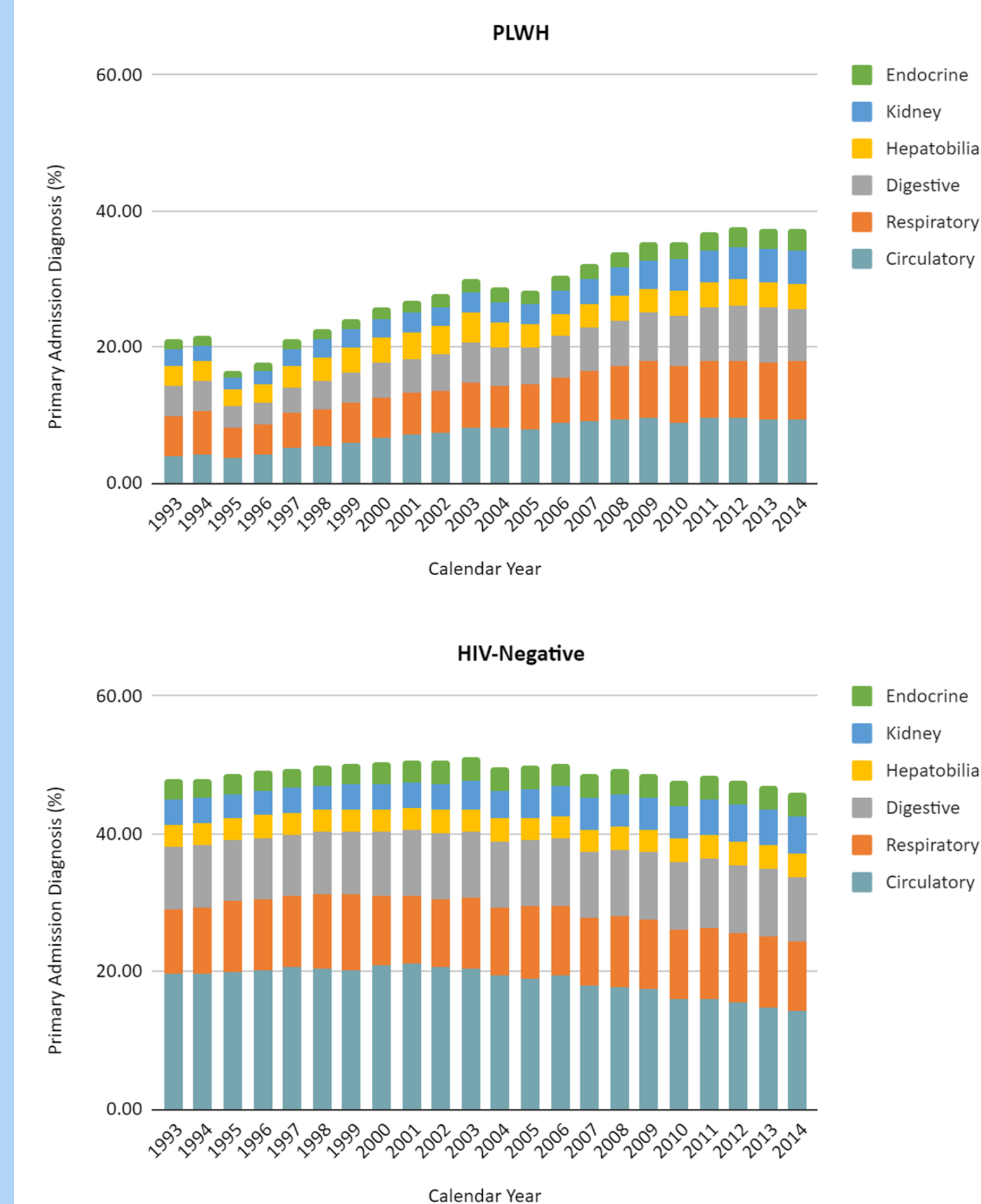


Figure 4. Chronic Conditions as the Primary Admission Diagnosis



RESULTS CONTINUED

- There was a significant decrease in the proportion of admissions with HIV as the primary diagnosis for PLWH between 1993 - 2014 (53.1% to 24.2%) with a corresponding increase in non-HIV diagnoses over that time (Figure 2). The proportions of primary admission diagnoses for HIV-negative patients were largely unchanged over the period.
- Although mean hospital lengths of stay for PLWH decreased over time, they were consistently longer than HIV-negative patients (Figure 3).
- Similarly, mean total charges for PLWH increased over time but were consistently higher than those for HIV-negative patients (Figure 3).
- From 1993 to 2014, the proportion of all PLWH who are hospitalized with chronic conditions increased from 21.03% to 37.5%, with the largest increases in circulatory, respiratory, and digestive systems (Figure 4).

CONCLUSIONS

- The primary admission diagnoses for PLWH has shifted from HIV to non-communicable causes as PLWH are living longer.
- PLWH are typically younger on admission and have longer and more expensive hospitalizations than HIV-negative patients.
- The mortality of PLWH has decreased over time compared no HIV-negative patients.

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