Multimedia Appendix 3. Study cohort construction, and inclusion/exclusion criteria: Retrospective cohort construction.
Study cohort construction, and inclusion/exclusion criteria: Prospective cohort construction.

EMR Records in Health Information Network 36 Providers
Patients N = 878,233
Encounters N = 4,711,133

Exclusions

Patients died
Patients N = 2,254
Encounters N = 18,871

Encounters transferred internally or externally
Encounters N = 5,809

Final Cohort
Patients N = 875,979
Encounters N = 4,686,453

Calibrating Cohort
Patients N = 875,979

With ED visit history and with chronic disease
Patients N = 80,080

With ED visit history and without chronic disease
Patients N = 78,703

With ED visit history but missing primary diagnosis
Patients N = 52,673

Without ED visit history but with Chronic Disease
Patients N = 259,884

Without ED visit history and without Chronic Disease
Patients N = 208,885

Without ED visit history but missing primary diagnosis
Patients N = 195,754