an MCO research network (MCORN) or state health department (SHD), we compared the data available to an MCORN to the data available to an SHD. **Results:** Data available to the SHD included hospital discharges, case fatality rates by diagnosis for hospitalized patients, counts of surgical procedures, and death certificate data. The disadvantage of organizing a surveillance system through an SHD is that hospitalizations are not linked to services provided during the hospitalization or survival after discharge. Likewise, behavioral risk factor data, medication data and data on ventricular function of patients with heart disease are not available. While MCOs have these data and data linkages, the disadvantage of organizing a surveillance system through an MCORN is that, although covering a significant segment of the US population, the surveillance system would not be strictly population-based. **Conclusions:** The data required to identify clinical opportunities to prevent and postpone deaths are available to a greater extent through MCOs than an SHD. The large populations covered by MCORNs, their geographic range, the relatively stable populations, and the implementation of electronic medical records all make large MCORNs attractive alternatives to SHD surveillance systems.

PS2-33:

Understanding Racial Disparities in Physician Advice and Patient Actions to Control Blood Pressure in an MCO

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Background/Objective: The Chronic Care Model (CCM) links proactive practice teams and activated patients with better chronic care outcomes. We studied the associations of blood pressure (BP) control with 1) physician advice and patient actions on lifestyle behaviors (exercise, diet, salt and alcohol intake) to control BP and 2) medication adherence in a cohort of adults with hypertension (HTN) in a managed care organization (MCO). Our primary analysis focused on the apparent paradox that, in this MCO, African Americans were more likely to report receipt of advice and be taking actions to control BP yet had worse BP control. **Methods:** Adults 18–74 years of age with HTN were identified from computerized data. Two independent samples of 3,000 adults each (750 per JNC-VII level) were randomly selected for telephone survey in October 2007 and March 2008. The survey included BRFSS items on advice and actions to control BP and self-reported race and education. Medication adherence was measured as proportion of days covered (PDC) with any HTN-related medication in the 12-month period preceding the survey. Mean SBP and DBP were measured from computerized data in the same period. Associations among receipt of advice, taking actions, PDC, and BP control were estimated using multivariate path analysis (controlling for age, gender, and education) for the 1,330 respondents who were African American (751) or white (579). **Results:** Compared to whites, African Americans had significantly ($p < 0.05$) higher SBP (standardized beta of 0.137). Better medication adherence was associated with lower SBP (0.229); however, African Americans had lower medication adherence (0.074). Patients taking action to control BP were more likely to have received physician advice to take action (0.232); and, African Americans were more likely to receive advice (0.187) and to take action (0.056). Poor SBP was associated with greater likelihood of taking action (0.075). A similar pattern of associations was observed for DBP. **Conclusions:** Compared to Whites, African Americans in this MCO were less adherent with antihypertensive medications; and, this contributed to worse BP control. Worse BP control, however, increased the likelihood that physicians advised African Americans to take actions to control BP. Consistent with the CCM, physicians appear to be directing their advice on lifestyle actions to the subset of patients most likely to benefit with improved BP control.

Clinical Effectiveness

C-C3-01:

A Conditional Sequential Sampling Procedure for Drug Safety Surveillance

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Background: Health plans' administrative claims data are known to be very useful in post-marketing drug or vaccine safety surveillance to detect certain adverse events that are difficult to capture during the preapproval clinical trials. To detect the existence of excess risk for an adverse drug event, hypothesis testing should be conducted whenever data is updated and thus appropriate group sequential or sequential analysis methods should be implemented to adjust for multiple testing and preserve the overall type I error rate. **Methods:** We propose a practical group sequential method, a conditional sequential sampling procedure, to derive valid inference on the parameter of interest, the relative risk for an adverse drug event between the drug of interest and the comparison drug. The method allows the information for both drug groups to be accumulated prospectively and thus, unlike the newly developed maximized sequential probability ratio test (MaxSPRT), doesn't require the availability of a lot of historical data for the comparison drug. Moreover, the method automatically adjusts for population heterogeneity and temporal trend and requires no a priori assumptions on how the baseline incidence rates change across strata and over time. In addition, the method remains valid (i.e., preserves the nominal Type I error rate) even when the number of interim tests is large and/or there are a lot of strata defined based on several potential confounders. We will explain why the standard general group sequential theory method might not be appropriate in such settings. **Results:** We have conducted an extensive simulation study to evaluate the performance of the new method and compare that to the performance of the general group sequential theory method in a subset of scenarios when applicable. The power performance for both methods in the considered scenarios is very similar and our new method applies to much more general settings. **Conclusions:** We will also implement this method to the data collected in the HMO Research Network CERT II study. This method can be particularly useful in prospective drug surveillance studies in which both drugs are relative new and not enough historical data is available.

C-C3-02:

Increasingly Restrictive Definitions of Hyperkalemia Outcomes in a Database Study: Effect on Incidence Estimates

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Background/Aims: Determination of hyperkalemia associated adverse outcomes incidence and risk assessment is complicated by lack of consistent hyperkalemia definitions across studies. Further, information about hyperkalemia from clinical trials, while reflecting the potential of renin-angiotensin-aldosterone system (RAAS) inhibitor treatment to increase serum potassium (K) concentration above a defined level, may not reflect risk or severity of outcomes. We sought to examine to what extent increasing levels of restriction influenced incidence estimates of hyperkalemia outcomes. **Methods:** The study cohort was drawn from a population of adult patients with diabetes at 3 HMORN sites. We identified all new users of a RAAS inhibitor between 01/01/2001 and 12/31/2006 and assessed hyperkalemia-associated outcomes within the first year of therapy. The initial definition of a hyperkalemia outcome to which other definitions were compared included any ambulatory (AV), emergency department (ED) or inpatient (IP) visit with a K level > 5.5 mmol/l or a coded hyperkalemia diagnosis within 7 days of the visit. The following restrictions were then applied: a) increasing minimum K concentration to > 6.0 mmol/l; b) reducing timeframe to 24 hours; and c) removing AV. Crude incidence rates of hyperkalemia-associated adverse outcomes were calculated using person years (p-y) determined as time from drug initiation to first outcome or other censoring event (e.g., drug discontinuation, end of study). **Results:**