Family Health History as a Risk Factor for Asthma and its Utilization in Health Care Practice

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Introduction

Research has shown that chronic diseases such as asthma tend to run in families (Zivin, Violino, Cohen, et al., 2010). Thus, comprehensive public health interventions for asthma should incorporate family health history information. The objectives of this study are:

1. To quantify the risk for asthma based on having an immediate family member with asthma among Utah adults, and
2. To assess (to the degree to which that data allow) sex, race/ethnicity, and geographic location on family health history information for preventive care purposes, particularly among adults with a family history of asthma.

Methods

A random sample of 1,000 adults aged 18 years and older was selected following the 2005 Utah HRRS survey. The survey included:

- Questions on any of your immediate family members who have been told by a doctor, nurse, or other health professional that you had asthma?
- Have you ever collected family health information for your relatives for the purpose of developing a family medical history?
- Is any of an immediate family member or friend of first-degree relatives with asthma?
- Your doctor or other health professional ever told you to look for anyone who is at risk for asthma in your family medical history?

Data analysis methods used:

- Logistic regression analyses were conducted for the risk of being diagnosed with asthma if an immediate family member had asthma.
- Categorization of single, multiple, married, and single according to career asthma status and having an immediate family member with asthma.

Results

The unadjusted odds of developing asthma were 3.7 (CI 2.6-5.5) times greater for adults with a family history of asthma compared to adults not reporting a family history of asthma. Adjusting for potentially confounding factors (age and smoking) increased the odds only slightly, to 3.5 times (CI 2.3-5.5) (see Figure 1).

Among adults with an immediate family member with asthma, only 25.8% reported having ever recently collected family health history information. Data that were self-reported having ever discussed first-degree relatives with a health care professional (44.9%) or reviewed recommendations from a health care professional (29.9%) based on their family history. Results were similar among the general adult population (see Figure 2).

Unexpected findings were that higher percentages of adults with asthma reported having collected or discussed their family health history information when compared to adults without asthma. Though differences regarding discussions of risk and recommendations with a health professional were not statistically significant, data still suggest differences between asthma status (see Figure 3).

Conclusions

- Having an immediate family member with asthma more than triples the odds of developing asthma, compared to individuals without a family member with asthma.
- Family health history appears to be understood as a tool for the prevention of asthma (unless such as asthma, as demonstrated by the low percentages of adults who reported any had collected family health history information or discussed it with a health professional).
- Data suggest that adults with a chronic illness such as asthma may be more likely to collect and discuss family health history, more so than adults who have not yet developed a chronic illness despite having a family history.

Significance for Public Health Practice

Public health efforts should emphasize the importance of knowing each family’s health history information and discussing its implications with a health professional for preventive purposes. This is especially important for chronic conditions such as asthma where a strong family component has been shown.

References

http://journalarchive.geneticsocietyofamerica.org/abstract/2009/10580/ The_association_between_family_history_and_asthma.htm