Table A3

Sensitivity analyses

1) The same multivariate logistic regression, as used in the main analysis, was repeated by excluding all other CAMs being listed in the miscellaneous option so as to restrict potential biases in misclassifying non-CAMs into CAMs. Regression results did not vary substantially between the 2 models. Uncontrolled asthma and female sex were significant factors predictive of CAM usage (OR=2.29, 95% CI: 1.31; 4.02 and OR=1.55, 95% CI: 1.01; 2.37) whereas other variables were not associated.
2) In the main analyses, asthma control was calculated with the assumption that any response to a GINA symptom criterion as "don't know" was treated as no symptoms. To address bias that could have been introduced by this assumption on asthma control and covariates, we treated the "don't know" response to GINA criteria as missing data in asthma control, hence we identified 18 out of 486 missing data (3.7%) in the re-defined asthma control variable. Multinomial logistic regression was performed to multiply impute missing values in re-defined asthma control using all other variables in the original logistic regression model. 5 datasets were generated from multiple imputations and applied to regression estimation. Appendix Table A3 shows that multiple imputations did not substantially alter the regression results predictive of CAM usage.

Table A3. Sensitivity analysis based on coding of controller medication intake, adjustment for demographics and multiple imputations: predicting whether utilized any CAMs.

	CAM usage, *multivariate OR (95% CI), p values*		
Independent variables of interest	Original model[a]	Other CAMs excluded[b]	Multiple imputation model[c]
Age	1.00 (0.98;1.01); p=0.70	1.00 (0.98; 1.01); p=0.67	1.00 (0.98; 1.01); p=0.73
Gender			
Male	Reference		
Female	**1.66 (1.09; 2.53); p=0.019**	**1.55 (1.01; 2.37); p=0.044**	**1.63 (1.07; 2.50); p=0.023**
Household income			
<$60,000	Reference		
≥$60,000	0.80 (0.52; 1.23); p=0.31	0.78 (0.50; 1.21); p=0.27	0.81 (0.52; 1.26); p=0.35
Education			
Less than post-secondary education	Reference		
Post-secondary education	1.07 (0.68; 1.69); p=0.77	1.05 (0.66; 1.67); p=0.83	1.09 (0.69; 1.72); p=0.72
Ethnicity			
Caucasian	Reference		
Asian	1.31 (0.76; 2.28); p=0.32	1.27 (0.73; 2.22); p=0.40	1.34 (0.77; 2.32); p=0.30
Other	1.14 (0.44; 2.96); p=0.78	1.20 (0.46; 3.10); p=0.71	1.18 (0.45; 3.05); p=0.74
Asthma control level			
Controlled	Reference		
Partially controlled	1.26 (0.72; 2.19); p=0.42	1.30 (0.74; 2.30); p=0.36	1.36 (0.75-2.47); p=0.31
Uncontrolled	**2.25 (1.30; 3.89); p=0.004**	**2.29 (1.31; 4.02); p=0.004**	**2.49 (1.38-4.49); p=0.002**
Intake of controller medication			
Low	Reference		
Moderate	1.22 (0.69; 2.16); p=0.49	1.28 (0.72; 2.27); p=0.41	1.22 (0.69; 2.16); p=0.49
High	1.10 (0.71; 1.71); p=0.67	1.17 (0.75; 1.82); p=0.50	1.10 (0.70-1.70); p=0.70

[a] The original multivariate model as displayed in Table 2, which studied the association of past 12 month CAM usage with asthma control and controller medication intake and controlled for age, gender, household income, education, ethnicity and lung function.

[b] This model repeated the original multivariate model by excluding all other CAMs from the past 12 month CAM uses.

[c] Multiple imputation was conducted using methods described in Appendix 3 with the assumption that asthma control values were missing at random. 5 datasets generated from multiple imputations were applied to regression estimation. The same control variables included in the original multivariate model were used in the multiple imputation and subsequent logistic regression