Black and Hispanic women having disproportionately high rates of obesity, type 2 diabetes and possibly polycystic ovary syndrome (PCOS). It is not clear if there are race-ethnic differences in reproductive dysfunction in women with and without PCOS.

Objective: To compare the prevalence of reproductive (irregular menses, oligomenorrhea, amenorrhea, infertility) and hyperandrogenic (HA) (hirsutism, acne) disorders in premenopausal women of diverse race-ethnicities with and without PCOS.

METHODS: Premenopausal women aged 18-50 were identified in our outpatient clinics in 2011 (n=23,196), of which 1,159 (5%) had PCOS. Race-ethnicity (RE) was self-reported and classified as: Black, Hispanic, White, Other (i.e. Asian/Pacific Islander, Native American, and others). The presence of reproductive and HA disorders was determined from the patient's problem list. Comparisons across groups were by Chi2 (SASv9.1).

RESULTS: Women with PCOS had higher rates of all reproductive and HA disorders than women without PCOS as expected (p<0.0001 for all). Among women with PCOS, Black women consistently had the highest rates of reproductive and HA disorders: irregular menses 31%, amenorrhea 26%, infertility 19%, hirsutism 17%, acne 14% (p<0.001 for all). Black women had the most oligomenorrhea, 12%, but differences across REs were not significant (p=0.06). Reproductive and HA disorders were low in premenopausal women without PCOS (<7%). Black women had the highest rates of irregular menses (6%), hirsutism (1%), and acne (6%). The Other group had the highest rates of amenorrhea (4%) and infertility (3%).

CONCLUSIONS: Black women with and without PCOS had more reproductive dysfunction than women of other race-ethnic groups. Black women may be particularly susceptible to developing PCOS and may have more severe reproductive and hyperandrogenic phenotypes than women of other race-ethnicities.