Healthcare is fundamental to personal life and social/economic development in society. The challenges resulted from population growth and aging have placed a considerable strain on the traditional healthcare system. Recent advances in smartphone based mobile devices and wearable/implanted body sensors have enabled mobile healthcare, which provides higher global coverage, lower cost, and easier access in continuous health monitoring and in-time healthcare compared to the traditional healthcare systems. Motivated by these observations, we explore the use of mobile phones in epidemic disease control. Since most infectious diseases spread through human contacts, we focus on modeling the diffusion of diseases by analyzing the social relationship among individuals. In particular, we aim to capture the interaction pattern among individuals using the contact information in mobile devices, and investigate its impact on the spread of disease. Disease control strategies are then proposed based on learned patterns and evaluated over real world datasets.