The 1994 FDA health advisory on serious X-ray induced skin injuries to patients during prolonged fluoroscopy guided procedures recommended certain steps to avoid serious radiation induced injuries. One of the ways of achieving dose reduction to patients at BHS was to encourage use of Pulse Fluoroscopy in lieu of Continuous Fluoroscopy. Since 1996 the fluoroscopic procedures conducted at Baystate Medical Center in Radiology, Cardiac Cath Lab and EP Lab are using pulse fluoroscopy. The present study compares the entrance skin exposures (ESE) to patient during continuous fluoroscopy (1994, 1995) and pulse fluoroscopy (1996, 1997). Each fluoroscopic procedure recorded the fluoroscopic times (min., max. and avg.) and the total # of cases conducted by individual physician. The measured output dose rates were used to calculate the average ESE and maximum ESE delivered. The average ESE's for pulse fluoroscopy in radiology, cardiac cath, PTCA studies and EP lab procedures are 12 R, 26.8 R, 81.2 R and 25.2 R respectively. The corresponding values for continuous fluoroscopy are 33 R, 39 R, 111.8 R and 67.8 R. The largest ESE's for pulse fluoroscopy are 96 R, 298 R, 351 R and 456 R. For continuous fluoroscopy the largest ESE's are 301 R, 405 R, 684 R and 720 R. Although the average fluoro times for both modes have remained the same (5 min. to 23 min.), the longest fluoro times vary from 42 to 300 minutes. The results show that considerable reduction in patient dose is achieved using pulse fluoroscopy at 15P/S.

249 words