Healthcare-acquired infections are increasing. Current cleaning and disinfecting (C&D) methods subject staff to toxic chemicals and can be damaging to the facility. Hypochlorous acid (HOCl) is a disinfecting solution that is 80-200 times more effective than bleach in surface disinfection of bacteria, yet is non-toxic to humans.

To determine if HOCl is as effective as standard cleaning methods for C&D GI ambulatory surgery center (ASC) rooms as determined by ATP (adenosine triphosphate) measurements over a 2-week period.

Two similar GI ASCs, each with two procedure rooms, were studied. One ASC received post-procedure STANDARD C&D with quaternary ammonium compounds in non-woven fabric for surface wiping of high-touch areas followed by terminal benzalkonium chloride foam/spray on these areas. The 2nd ASC received HOCl C&D using on-site freshly prepared HOCl, 1000 ppm (Fig. 1). Microfiber cloths semi-wet with HOCl were used for wiping surfaces for both C&D. In the HOCl rooms, after terminal manual wiping, misting with HOCl of the entire room was performed.

Selected high-touch area ATP testing was performed in all rooms before procedures in the AM and 10 minutes after terminal manual cleaning. In the HOCl rooms, testing was also performed 10 minutes after misting. High-touch areas tested in each room included: endoscopic cart (3 locations/cart), both gurney bed rails, computer mouse (2), working counters (2 areas), light switch, door knob. ATP scores were compared within each site using Analysis of Means (ANOM).

After terminal cleaning, the average ATP score in the HOCl CLEANING and DISINFECTING study arm was significantly lower than that for the STANDARD CLEANING and DISINFECTING rooms (P = 0.0017) (Fig. 2). In evaluating the effect of the HOCl misting, the ATP scores in the HOCl rooms had a post cleaning, pre-misting average score of 2.7. The post misting average score was 1.7 showing that misting produced a further significant reduction (improvement) in ATP scores (p = 0.01).

HOCl reduces ATP scores by 80%