

Cruise tap versus handshake: using common sense to reduce hand contamination and germ transmission on cruise ships

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ABSTRACT

A firm handshake is a widely used greeting, but contaminated fingers and palms can also transfer bacteria and virus. Hand sanitation is important to prevent spreading of contagious diseases, but to wash hands properly takes too much time to ensure satisfactory compliance. Banning the handshake from health care settings has been proposed, but an alternative, less contagious form of greeting must be substituted. Cruise ships are particularly vulnerable to infectious diseases that are transferred from person to person. The fist bump, common in some subcultures, has become increasingly popular as the greeting-of-choice on smaller cruise vessels. To further reduce the contact area, a modification of the fist bump, the ‘cruise tap’, where only two knuckles briefly touch each other, is recommended.

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Key words: cruise tap, fist bump, handshake, health promotion, norovirus, outbreak prevention, maritime medicine

INTRODUCTION

THE HANDSHAKE

A firm handshake is an internationally widely used greeting, a show of mutual respect, equality and good will. It was originally a symbol of peace; already the Vikings offered and grasped each other’s dominant hand to demonstrate that they did not bear arms and came with good intentions [1].

Particularly in the Western world, the handshake is customary at introductions. In Germany, it is common for a person who is joining a group to shake hands with every single individual, and friends shake hands almost every time they meet – both when arriving and when departing [2].

In the health care setting, where patient encounters commonly begin and end with shaking hands, the handshake may improve the perception of the physician’s empathy and compassion, and it can comfort and calm the patient [3].

However, the handshake is also an easy way to transfer germs, not usually a great concern, but who is not reluctant to shake hands with someone who was just witnessed

to sneeze or cough loudly into his or her hand – during an influenza outbreak? And how do you then – politely and diplomatically – turn the offered hand down, without hurting the other person’s feelings? Many individuals have made their own efforts to avoid shaking hands in various settings but, in doing so, may face social, political, and even financial risks [3].

HAND SANITATION IN HEALTH CARE SETTINGS

Since Ignaz Semmelweiss (1818–1865) it has been known that clean hands can prevent transmission of diseases [4], but physicians and nurses are still notorious for poor hand hygiene compliance [5]. A review article on infection prevention in the emergency department emphasizes that when performed regularly and correctly, hand hygiene eliminates transient flora, thereby disrupting transmission of microorganisms [6]. But the review does not mention the potential danger of handshakes.

Sklansky et al. [3] address this challenge and propose banning the handshake from the health care environment.

They recognise that further studies may be required to confirm and better describe the link between handshake-related transmission of pathogens and disease. Nevertheless, they consider it a “mistake to dismiss, out of hand, such a promising, intuitive, and affordable ban given the tremendous social and economic burden of hospital-acquired infections and antimicrobial resistance”. But they also point out that a suitable replacement may need to be adopted and promoted with widespread media and educational programs [3].

HAND SANITATION ON CRUISE SHIPS

Passenger ships are semi-closed communities where contagious illnesses can spread easily and quickly, through common food and beverage sources and from person to person. Close contact between passengers and crew from multiple geographical origins provide opportunities for transmission of communicable diseases, and many outbreaks have been reported [7, 8]. The United States Centers for Disease Control and Prevention (CDC) has since the early 1970s enforced a detailed Vessel Sanitation Program (VSP) for all ships visiting United States ports to prevent and handle outbreaks on ships [9], and many other countries have started similar programs [7].

Most outbreaks of communicable disease on ships during recent years have been caused by norovirus [10], causing ruined vacations for passengers and much extra work for crew. With more than 20 million cases a year in the United States alone [11], the risk of contracting acute gastroenteritis from norovirus is much greater ashore than on ships, but since the impact on cruises are much more visible, the media has dubbed norovirus “the cruise virus” and “the cruise bug”.

There is therefore a particular focus on prevention aboard cruise ships [7, 9], and on the CDC web site there are simple hand sanitation guidelines for prevention of norovirus infections [12]:

Norovirus is very contagious and can be transmitted from an infected person, from contaminated food or water, or by touching contaminated surfaces. Avoid exposing yourself and others to anything that may cause illnesses and spread germs. Wash your hands often for at least 20 s with soap and water, especially before touching your hand to your mouth and after going to the bathroom, changing diapers, touching high-hand contact surfaces, returning to your cabin, helping a sick person and blowing your nose. Furthermore, alcohol-based sanitizers can be used “in addition” to hand washing, never as a substitute. Hand sanitizers can reduce the spread of some viruses, like influenza. But against norovirus they are largely ineffective; better to use soap and water [12].

A 6-step hand-hygiene technique recommended by the World Health Organisation was found to be superior to the

3-step method suggested by the CDC in reducing bacteria on healthcare workers’ hands, but required 25% more time to complete (43 s vs. 35 s). Also, compliance with the 6-step technique was lacking. Only 65% of providers completed the entire hand hygiene process despite participants having instructions on the technique in front of them and having their technique observed [13].

HIGH-HAND CONTACT SURFACES ON CRUISE SHIPS

CDC specifies doorknobs, elevator buttons and railings as high-hand contact surfaces [12]. These and all other commonly touched surfaces aboard cruise ships are routinely and regularly washed down with antibacterial and antiviral solutions, and this practice is stepped up considerably during outbreaks. However, these areas may quickly be re-contaminated; they are only clean until the next person has touched them.

CDC doesn’t mention human fingers and palms as high-hand contact surfaces, but on ships they clearly are because of the widely used custom of handshaking. Especially on the smaller and more intimate cruise ships social interaction is high and passengers, officers and crew get to know each other quickly. During the captain’s public parties the passengers anticipate to shake the hand of the master — and that of the many senior officers who are also present in the receiving line. However, there is no time to wash hands between handshakes, nor is there usually a hand washing unit close by.

Some cruise vessels have tried to move away from the handshake for years. An outright ban is difficult in customer friendly environments — unless one recommends and vigorously promotes an acceptable substitute greeting, which must like the handshake convey trust, respect, balance, and equality. One such alternative — without palms touching — is the ‘fist bump’, also known as ‘power five’, ‘dap’, ‘touch’, ‘fist pound’, ‘brofist’ or ‘respect’ [14, 15]. From a hygienic point of view a modification of the ‘fist bump’, the ‘cruise tap’, might be even better.

METHODS

THE ‘FIST BUMP’ (FIG. 1)

One fist meets another with the dorsal side of all four ulnar proximal phalanges touching. The contact area is far smaller than during a handshake and the volar finger areas and the palms that are most likely to be contaminated are not touching.

THE ‘CRUISE TAP’ (FIG. 2)

To further reduce the total surface area touched, the fist bump is modified in a way that only one knuckle touches one knuckle of the other person. In order to achieve this,



Figure 1. The ‘fist bump’: one fist meets another with the dorsal side of all four ulnar proximal phalanges touching



Figure 2. The ‘cruise tap’: a modified fist bump where only one knuckle of a fist *swiftly and gently* touches another. In order to achieve this, one or both fists are bent down and to the side (palmar flexion + ulnar deviation)

the fist is bent down (palmar flexion) and to the side (ulnar deviation) just before the brief and gentle touch (tap) of the leading knuckle. Like with the ‘fist bump’, both the right and the left hand can be used.

The ‘cruise tap’ should be accompanied by a smile, and a short, friendly explanation if met by signs of surprise or hesitation.

Since the primary reason for using the greeting on ships is to prevent spreading “cruise bugs”, the ‘cruise tap’ might be an appropriate term; and ‘tap’ may be better than ‘bump’ since it suggests a *swift and gentle* gesture.

DISCUSSION

The ‘fist bump’ has been known for a long time from the boxing ring where opponents touch gloves before the match. A gesture similar in meaning to a handshake, the salute has become increasingly popular in many subcultures around the world. Both participants are equal in this greeting that expresses approval and respect, and many public photos show United States President Barak Obama fist-bumping family members and visitors.

On cruise ships many alternative salutations that do not involve touching of palms have been tried, like bumping hips and elbows, but despite their humorous potential they have not caught on. Non-touching greetings, like the

Thai wai, the Hindu namaste, and bowing are good hygienic alternatives for those who traditionally use these greetings. But for outsiders they are sometimes perceived as carrying religious or hierarchical implications and many find them too impersonal for general cruise ship use. For them, the fist bump may be a good choice.

The ‘fist bump’ has been shown to reduce bacterial transmission between health care providers compared with the standard handshake [14, 15]. When using it primarily for transfer prevention, the main points are to avoid touching the most contaminated area (palms and fingers), reducing total surface area touched and shorten contact time. The ‘cruise tap’ will further reduce the touched surface and is just as simple to perform.

A firmly established “good” habit can only be broken if it can be replaced with another habit that is just as easy to do and preferably conceived as better. Motivation is therefore crucial. For the ship’s doctor, the key to success is to make the ship’s captain and executive committee understand the possible benefits of the safer ‘cruise tap’ and then have them actively promote and follow up the new habit among all passengers and crew – in as many ways as imaginable.

Already at the gangway all passengers and crew are subjected to mandatory hand sanitation. The ‘cruise tap’ will further raise the awareness of hand contamination. It may be another little step toward reducing unnecessary extra crew work and saving passenger vacations by avoiding annoying symptoms and isolation. And while hard evidence regarding infection prevention is lacking, common sense can make a difference.

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