



Video Phone Communication With Patients In Isolation

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Abstract

The most stringent isolation precautions (airborne precautions) warrant the most commonly used N95 respirators to be worn by healthcare providers in negative pressure rooms caring for patients suspected or confirmed to be harboring airborne pathogens. However, although N95 respirators aim to protect healthcare providers by filtering out at least 95% airborne pathogens, their use can be discomfoting leading to impaired functioning of healthcare providers. Therefore, it may be worthwhile to explore videophone communication with patients in isolation so that total duration of discomfoting N95 respirators' use can be limited while unmasked faces may ensure improved in-hospital experience due to more fulfilling communication on videophones and reduced in-room traffic enhancing patient safety among "isolated" patients.

Opinion

The most stringent isolation precautions (airborne precautions) warrant the most commonly used N95 respirators to be worn by healthcare providers in negative pressure rooms caring for patients suspected or confirmed to be harboring airborne pathogens.¹⁻² However, although N95 respirators aim to protect healthcare providers by filtering out at least 95% airborne pathogens, their use can be discomfoting leading to impaired functioning of healthcare providers.³⁻⁵ Therefore, avenues like videophone services should be explored wherein healthcare providers can communicate with patients without entering negative pressure rooms wearing N95 respirators.⁶ After ensuring its Health Insurance Portability and Accountability Act (HIPAA)-compliance,⁷⁻⁸ the exploration of videophone (videotelephony) may ensure that patients can utilize videophones for face-to-face communications with unmasked healthcare providers. While patients can be continuously monitored remotely with audio-video telemonitoring,⁹ entry into negative pressure rooms and duration of N95 respirators' use can be limited to only those instances when physical presence of healthcare providers inside "isolation" room is

essential. If patients' and healthcare providers' acceptance levels of videophone use turn out to be high, then this avenue can be explored for less stringent isolation precautions too (droplet precautions and contact precautions). Similar example is audio-video telemonitoring of patients receiving in-hospital radiation therapy with possibility to incorporate videophone communication during radiation therapy in "isolation".¹⁰

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There may be few barriers to videophones' in-hospital exploration and implementation. Ideally, there should be cubicles attached to "isolation" rooms so that healthcare providers can freely communicate with patients on videophones without breaching confidentiality. Alternatively, attached cubicles connected to "isolation" rooms may have common transparent window-wall with two-way voice communication channels across as similar to electromagnetic compatible (EMC) shielded windows used in radiology suites.¹¹ However, constructing cubicles may increase infrastructural costs. Innovative video headphones can provide additional privacy during communication;¹² however, video headphones may cover eyes of patients and healthcare providers interfering with eye contact which is essential for effective communication and one of the reasons for preferring videophones over voice phones. It will be noteworthy if cleansing and sterilization practices for used video headphones and videophones will be effective because currently they seem too costly to be single-use or single-person-use. Anyhow, videophones may need earphones with microphones to ensure confidentiality unless used inside private cubicles or offices. When envisaging group videoconferencing to include patients' families, safe information technology measures would have to prevent more than one patient's videophone getting connected into confidential group videoconference. Additionally, to avoid videophones getting voice-video tapped inadvertently or intentionally,¹³ hospital videophone systems can have futuristically air-gapped transmission cables connecting in-hospital videophones as wired-only locally connected restricted-access devices remaining disconnected with outside world.¹⁴ Â

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Summarily, it may be worthwhile to explore videophone communication with patients in isolation so that total duration of discomforting N95 respirators' use can be limited while unmasked faces may ensure improved in-hospital experience due to more fulfilling communication on videophones and reduced in-room traffic enhancing patient safety among "isolated" patients.

Reference(s)

1. U.S. National Library of Medicine. Medline Plus. Isolation precautions. (Updated Oct 29, 2015.) Accessed Feb 15, 2018. <https://medlineplus.gov/ency/patientinstructions/000446.htm>
2. Centers for Disease Control and Prevention. The National Institute for Occupational Safety and Health (NIOSH). NIOSH-Approved Respirators. (Updated Aug 18, 2016.) Accessed Feb 15, 2018. https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/respsource1quest1.html
3. Centers for Disease Control and Prevention. The National Institute for Occupational Safety and Health (NIOSH). Recommended guidance for extended use and limited reuse of N95 filtering facepiece respirators in healthcare settings. (Updated Mar 13, 2014.) Accessed Feb 15, 2018. <https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html>
4. Johnson AT. Respirator masks protect health but impact performance: a review. *J Biol Eng.* 2016 Feb 9;10:4.
5. Rebmann T, Carrico R, Wang J. Physiologic and other effects and compliance with long-term respirator use among medical intensive care unit nurses. *Am J Infect Control.* 2013 Dec;41(12):1218-1223.
6. Wikipedia. Videophone (Videotelephony). (Updated Feb 8, 2018.) Accessed Feb 15, 2018. <https://en.wikipedia.org/wiki/Videophone>
7. U.S. Department of Health and Human Services. Office for Civil Rights. HIPAA Questions Portal. Which video chat apps are HIPAA-compliant? (Updated Oct 24, 2017.) Accessed Feb 15, 2018. <https://hipaaqportal.hhs.gov/a/dtd/Which-video-chat-apps-are-HIPAA-compliant/132594-36899#idea-tab-comments>
8. VSee. HIPAA and VSee Video Conferencing. (Updated 2018.) Accessed Feb 15, 2018. <https://vsee.com/hipaa/>
9. Cisco. Virtual Patient Observation: Centralize monitoring of high-risk patients with video. (Published Oct 2013.) Accessed Feb 15, 2018. https://www.cisco.com/c/en/us/products/collateral/physical-security/video-surveillance-manager/white_paper_C11-715263.html
10. Matovic M, et al. Three reasons for on-line remote telemonitoring of patients treated with high doses of radionuclide therapy. Our experience. *Hell J Nucl Med.* 2015 Sep-Dec;18 Suppl 1:151.
11. Optical Filters. EMC windows/MRI rooms. (Updated 2018.) Accessed Feb 15, 2018. <http://www.opticalfiltersusa.com/emc-windowsmri-rooms.html>
12. VUZIX. Bundle pack, iWear HD Video Headphones and Diversity Receiver. (Updated 2018.) Accessed Feb 15, 2018. <https://www.vuzix.com/Products/iWear-Video-Headphones-Diversity-Receiver-Bundle-Pack>
13. Rosen Law Firm. North Carolina Divorce. Can I tap my spouse's phone? (Updated 2018.) Accessed Feb 15, 2018. <https://www.rosen.com/alimony/alimonyarticles/cell-phone-spyware/>
14. Wired. Extreme security measures for the extra paranoid. (Published Dec 9, 2017.) Accessed Feb 15, 2018. <https://www.wired.com/story/extreme-security-measures/>