



## Video Chat Latency

### The problem

Based on archiving requirements we had two years ago, we chose to use the Adobe Flash Media Server technology for our video chat feature. Because of archiving, the transmission always goes through the server as opposed to performing point-to-point communication.

Adobe FMS uses a protocol called RTMP to deliver media content. RTMP is built on top of TCP, a reliable transport protocol: when voice/video packets are lost, they are retransmitted. The downside is that when packet loss ratio exceeds a certain threshold, the retransmission causes communication delays. The higher the packet loss, the greater the delay between patient and provider. On a typical network, packet loss is very low. However, with Mac computers' wireless drivers, the packet loss can increase to a level that prevents the video chat from functioning properly.

The new video chat module will be built upon RTMFP, which is built on top of UDP protocol. UDP is a lossy transport protocol, which means that every packet lost is dropped instead of being retransmitted. Lossy protocols are better suited for VoIP applications. Only very high packet loss will cause communication to break up. Furthermore, this new module supports point-to-point communication, reducing latency when recording is not necessary.

### Our recommendations

- Use a wired connection as much as possible
- Wear a headset to avoid acoustic echo

Please contact [support@hellohealth.com](mailto:support@hellohealth.com) for any question you may have about Hello Health.

Also, you can visit our Hello Health support site:  
[support.hellohealth.com/providers](http://support.hellohealth.com/providers).