

### Recommendations for Selecting and Purchasing Video Conferencing Software - Considerations

This document provides guidance and recommendations regarding selection and purchase of a video conferencing (VC) system to be used for the supervision of students in the department and in the field.

#### Types of video conferencing systems

Commonly there are three types of video conferencing (VC) systems.

1. Those that operate independently of any external service in point to point mode (direct dial) e.g. Polycom, Cisco, Lifesize
2. Those that require an external service to set up the call, but then route the call data directly between Tablets e.g. Skype
3. Those that route all call data to an external server and back for the entire duration of the call even when Tablets are used on the same network e.g. Vidyo

It is recommended that the system doesn't send video out to the internet and back particularly if both devices are internal to an organisation. This reduces security risks (particularly when patient data is transmitted), reduces unnecessary data charges and reduces congestion of internet bandwidth which leads to more consistent audio and visual quality.

An Internet service may be required to find the other device/user and make the initial connection, but the preferred model is then for the devices to communicate directly rather than through a broker for the entire duration.

#### Considerations

##### **IT department preference**

Liaison with your organisation's IT department is essential. Many health organisations already have a video conferencing (VC) system in place which may be suitable for use in your department/service. If a system is not in place, your IT department will need to evaluate what system will suit the organisation's computer operating platform, meet the organisation's bandwidth restrictions and off site access requirements, and provide adequate security and protection.

## **Budget**

There are a range of free VC applications such as Skype and Facetime, however both of these use an external server arrangement and personal logins. They are likely to impact on your organisation's bandwidth and may be blocked by existing organisational IT firewalls. Therefore they may be prone to regular drop outs and security risks.

There are also a range of paid software based VC or web collaboration services, however again many of these use an external server. Paid services are usually on a contract and a 'pay by the month, by the user' system. Charges will be issued for exceeding usage (often minutes) and therefore will need to be monitored regularly – unless an unrestricted use plan is purchased. Some VC systems allow for the 'system portal' to be housed within your IT department. This keeps the data internal to your organisation and can remove the pay for use costs, however there are significant costs associated with the purchase, implementation and support such a system.

## **Security**

As mentioned above, given patient data may be transferred over the VC system, it is essential that your organisation research the safety of the chosen VC system. An in-house or internal system will provide the greatest security as data is controlled by the IT department security systems and policies.

## **Internet connection/ Network**

Ideally a system that utilises your organisation's wireless network is preferred when using VC system on site (this minimises charges for 3/4G and provides for a more reliable connection). A 3G or 4G network can be utilised when using the system off site. Should a wireless network not be available or not be reliable, an independent ADSL modem can be utilised, this may require a repeater to extend the range. Refer to output no. 5c(ii) "Connecting your Tablet to the internet" for further information about internet connections.

## **Firewalls**

A firewall is a security system for a network that aims to block unauthorised or unwanted traffic from accessing a computer network. Depending on how your organisation's firewall has been set-up, it may prevent the use of some VC software. Your IT department will be able to provide further information about existing firewalls and the restrictions in place in your organisation.

## **Link Quality**

The VC system will need to work within the bandwidth restrictions and overall performance or quality of your organisation's internet connection and the 3G/4G network that is used when off-site.

## Testing

We would advise that you ensure VC software is trialled before purchase and full implementation. It is essential that adequate testing is conducted within the clinical setting (both internally and externally, if applicable) to determine issues such as ease of use, peripherals required (stands, bags, Bluetooth headset, network connectivity, drop out, latency, audio and visual quality).

## Seek guidance

Should you require further guidance, consultation from the Australian Centre for Health Innovation (CHI) is recommended to determine the best video-conferencing solution for your organisation. CHI has experience in assisting with all these considerations and can provide a clinically relevant road test in their mock health/home environments to assist prior to purchase or pilots.

*With thanks to the Australian Centre for Health Innovation*



*This project was possible due to funding made available by Health Workforce Australia and the Department of Health, Victoria.*

