

# RISK MANAGEMENT FOR SKYPE USE FOR CLINICAL VIDEO CONSULTATIONS

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What are the risks and how can these be managed?

## 1) QUALITY OF SERVICE

Under ideal conditions the image and audio quality of a Skype video call is very good. However, if there are difficulties at either end of the call or the connectivity in between, the picture and sound will vary in an unpredictable way. Jerky movement due to low frame rate, freezing and drop outs may occur at any time, potentially hindering the quality of the consultation.

As there is no means of giving priority to a Skype call over other traffic on the same connection (such as sending emails or downloading from web pages) Skype and other similar solutions will perform poorly when the bandwidth is marginal.

Skype also does not offer any technical support and while an IT providers can assist with setup and advice on how to use Skype, they cannot access the inner workings of Skype to fix any issues you may experience.

### Mitigating the risk

- Make sure the connection bandwidth is as high as possible, and consider installing a separate broadband connection for video calls if demand warrants it and funding allows it.
- Always use a network cable to connect to the computer using Skype directly to the router. Connecting over WiFi can result in unpredictable connection speeds and contribute to random call drop outs.
- Try not to use Skype for long consultations. As the duration of the Skype call increases, so too does the risk of the call dropping out momentarily or ending entirely at some point.
- If your Skype call ends unexpectedly and your only video conferencing option is Skype, you will need to call the patient over the telephone to maintain a connection until either the Skype call can be resumed or an alternative arrangement can be made.
- If it is likely that video calls will be used regularly for **critical or urgent clinical consultations** we advise against using Skype and recommend setting up a more reliable means of video communication.

## 2) SECURITY RISKS OF SKYPE VIDEO CALLS

Skype is encrypted during transmission and the overall risk of a transmission being intercepted is considered to be very low. However, New Zealand based Skype traffic may be routed outside of New Zealand, through countries with the means and possibly the intention of monitoring calls. Key points to consider are:

- 1) As Skype is a proprietary system which cannot be audited from outside, there is no way of finding out if a security breach has occurred or not.
- 2) There are groups operating who send multiple unsolicited calls through Skype, some of which are malicious and are used, for example, to enable remote access to the user's computer.

#### Mitigating the risk

- Skype is considered to be reasonably safe at the present time to use for video calls, but users must be aware that the means of interception and range of organisations able to do this may grow and spread.
- It is recommended that Skype users make their own judgment about the sensitivity of the consultation and the risk to the patient if the call is intercepted. If this risk is high, yet Skype is the only viable option for consultation, the microphones should be muted at both ends and a concurrent telephone call should be used for the audio component of the call.

### **3) SECURITY RISKS OF SENDING DATA THROUGH SKYPE**

Skype has the ability to send text in a chat room format, and also to transfer files. This information is stored and therefore the risk of a security breach of transferred files is much higher than for video calls, as stored information is vulnerable to hacking at any time into the future.

Two other issues are that text is kept in a history file, so could be called upon as medico-legal evidence, and transferred files may contain viruses or malware.

#### Mitigating the risk

- Do not use the text chat or the file transfer features of Skype for clinical purposes.

### **4) WRONG CONNECTIONS**

Because the address book is so large (>600 million), there is the potential for many people to use the same name on Skype or similar usernames, raising the chance of accidentally contacting the wrong person.

#### Mitigating the risk

- Identify all users before accepting them to your address book.
- Never accept anonymous calls. Only accept calls with predefined users who are in your address book.
- Only hold consultations with patients known in person to the clinician, allowing them to establish recognition and confirming the call is with the person they believe it to be.

# Risk Management for Skype Use

## SUMMARY

- Skype is already being used by many clinicians and is growing in acceptance as a standard of providing clinical consultations with a wide range of patients.
- Appropriate for practices whose patients are isolated or face hindering travel times to reach the practice, Skype can be used where video consultations are deemed appropriate given the patients' intended consultation.
- Where infrastructure and funding (from both the clinician's and patient's end) allow for a private network to be used, Skype should be discarded in place of more secure, higher quality video conferencing equipment.
- Skype was created for the open community with no focus on medicine. It therefore offers calls of variable quality and reliability which may not be suitable for certain clinical consultations.
- The risk of an outside agency intercepting a Skype video call is presently low, but may increase over time.

## RECOMMENDATIONS

- Skype should be considered for use in clinical video consultations where the alternative is none at all.
- Do not send clinical information using Skype text or file transfer.
- Use Skype for shorter, non-urgent consultations; only use it for emergency consultations when no alternative is available.
- To maximise the bandwidth and the connection speed, connect to the internet over a network cable rather than WiFi.
- When Skype is unreliable or when there are concerns about the security of the call, use the telephone for the audio component of the call.
- Install a dedicated broadband connection for TeleHealth if demand for its use is high and a private network is unavailable.

For further advice or answers to specific questions regarding Skype use in clinical consultations, please email us at [help@telehealth.co.nz](mailto:help@telehealth.co.nz).

## References

<http://www.mcnz.org.nz/assets/News-and-Publications/Coles/Chapter-15.pdf>

