

Vidyo joins forces with Lower Murray Medicare Local to enhance health services for regional Victoria



The Agency

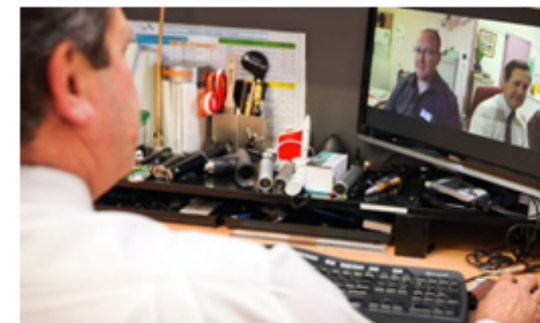
Lower Murray Medicare Local (LMML) is a primary health care organisation, established by the Australian Government Department of Health and Aging to coordinate primary health care delivery and tackle local care needs and service gaps in its catchment. LMML works with General Practitioners, Specialists Practitioners, Allied Health and Community Health care providers to drive improvements and greater integration in primary health care and ensure that services are better tailored to meet local community needs. Servicing a wide geographic area stretching from Wyperfeld National Park in northern Victoria to Pooncarie in south west New South Wales, and from the South Australian border as far east as Balranald in New South Wales, the catchment area has a diverse population, with a higher than average percentage of people in the 0-14 year and 45 years and above age groups, and the highest Aboriginal and Torres Strait Islander population of catchments in Victoria.



In addition to agency activities aimed at improving outcomes in key priority target areas of Aboriginal and Torres Strait Islander health, aged care, after hours services, mental health and health promotion, LMML was given the task of investigating telehealth access for patients and primary health care providers to tertiary and specialist services, through the provision of virtual consulting rooms equipped with video conferencing infrastructure.

LMML's Telehealth Program - Goals

The LMML Board of Directors (supported by a clinical advisory committee and a consumer reference group) provides oversight of the agency's telehealth program, with Troy Bailey LMML's IT Manager holding primary responsibility for the investigation of appropriate solutions, program implementation and subsequent system administration. Key goals of the program were to investigate the potential for telehealth services to plug health care service gaps across the agencies large geographic area, and to make available services where none currently existed. In particular, the program looked to increase patient access to specialist services via GPs clinics, where patients often have difficulty travelling to out-of-region specialists, and specialists face logistical and case load challenges in seeing their patients as frequently as optimal health care provision might demand.



Finding The Right Solution

LMML looked at a number of video conferencing products currently available, and also contacted other health care agencies who had already implemented a variety of solutions. Capability criteria identified as key requirements for the

The Challenge

The provision of a telehealth service using appropriate video conferencing technology to enable local GP's and out of region Specialist Doctors to provide consultation and care to patients dispersed over a wide geographic area.

The Solution

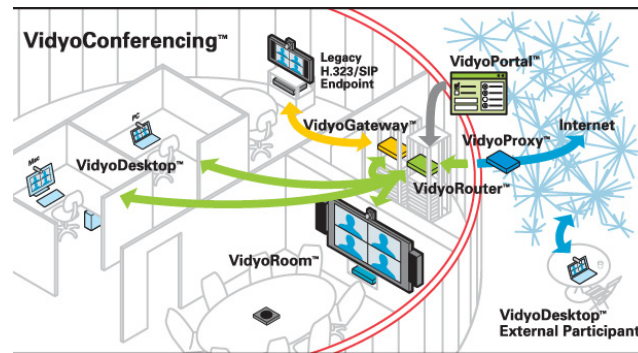
- 1 VidyoPortal
- 10 VidyoLines
- 100 Vidyo Soft Client install licenses

The Result

Implementation of the Vidyo solution in a central datacentre within budget, providing a low cost, easy to use service to system users regardless of geographical location, accessed via the Internet from existing computers.

planned telehealth system included:

- Both video and sound quality to be of high quality.
- Very high levels of reliability for all conferences conducted on the system.
- A user interface sufficiently easy to use that health care professionals with low levels of IT expertise would be able to conduct conferences without lengthy periods of training.
- The solution adopted could be used as required by health professionals regardless of geographical location, and with a minimum of equipment at the user's site.
- The initial investment in equipment needed meet a modest budget.
- Ongoing costs needed to be kept as low as possible.



Looking at the available solutions, LMML found that many products required dedicated and expensive equipment to be installed at all sites needing to use the video conferencing system, and that these types of products often required a dedicated conference room. LMML identified that a software-based video conferencing system utilising a centralised server and accessible to system users on an ad hoc basis provided a much more flexible telehealth solution.

Concentrating on this type of technology, LMML evaluated the solution offered by Vidyo. Based on a central server accessed via the ADSL or Wireless services from standard desktop PC's or Macs which required only a client licence and standard third party webcams and speakers, their VidyoConferencing solution ticked the boxes for ad hoc use by health professionals and their patients over a wide geographical area. Looking at the underlying technology, Troy discovered that Vi-



dyo's solution provided excellent audio and high definition video at up to 1080p HD quality. With Vidyo basing their technology on the latest H264-SVC video codecs as well as achieving end-to-end network latency performance generally half that of other systems, system resiliency was very high. Vidyo's technology (which they refer to as 'Adaptive Video Layering'), dynamically optimises the video for each endpoint participating in a conference, and leverages the H.264-SVC codec implementation to achieve high rates of compression without sacrificing video quality, and enabling highly intelligent error correction routines that provide excellent system resilience if network packet dropout should occur. Vidyo's clean user interface proved to be easy to master, with conferences initiated with a few mouse clicks. LMML found the initial investment to be very low compared to most other products, with ongoing costs at a low level and the flexibility to increase system capacity via licences at a modest cost.

Implementation The Solution

Having made a decision to adopt Vidyo's video conferencing solution, Troy at LMML selected a datacentre in Geelong, Victoria, to house a Vidyo VidyoPortal, provisioned with ten VidyoLine licences to support up to ten concurrent conference participants. The flexibility of LMML's telehealth service was helped by the fact that the VidyoPortal licencing was scalable to potential future demand. Installation was undertaken by Troy with the VidyoPortal pre-configured by Alloy, Vidyo's Australian distributors, who also provided some remote support via telephone and the systems HTTP-based remote administration capability. The VidyoPortal installation was completed within a day.



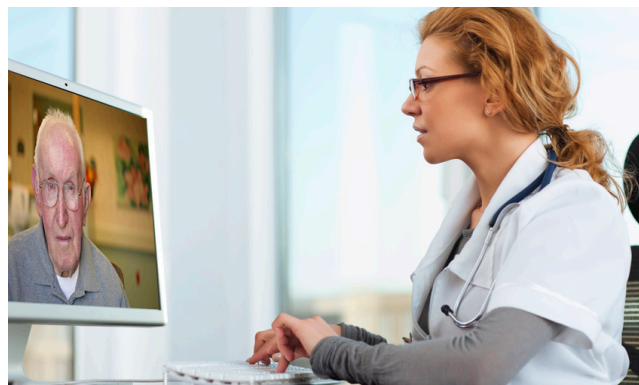
The Vidyo Experience

With the infrastructure in place, LMML commenced offering a free telehealth service to all GP's in their region as well as specialist practitioners caring for their patients from Adelaide and Melbourne. As would be expected, busy health professionals with heavy workloads (GPs in the area average forty or more consultations a day) needed to be convinced that the system would be non-intrusive and cost effective. When GP's understood that existing computers in their consulting rooms and existing broadband services could be used with only the additional cost of an off-the-shelf USB connected webcam the take-up was overwhelming. Early users of the telehealth service rapidly found that the Vidyo system interface was quick and easy to use, and did not impose a barrier between patient and their health care needs.

As anticipated, one of the primary uses of the system proved to be video conferencing between remote specialists and their patients in the GPs consulting rooms. This has led to a significant increase in access to services for patients in the areas of Endocrinology, Rheumatology, Urology, Psychiatry, Nephrology, Cardiology, pre/post-Surgery etc. etc.. LMML and system users report that patients are now able to attend consultations that would otherwise have been impossible for them. One specialist was not only able to maintain his quarterly service in an area where the local commercial air service he used had recently been withdrawn but now provides eight additional video clinics per year.

Expectations met?

LMML were able to implement their telehealth video conferencing solution within their budget of \$20,000. The system performs to specification, with excellent reliability and quality of service. LMML reports a rapidly growing take up of the service by GP's and specialists, and interest from health professionals in rural communities outside their catchment.



The benefit of LMML's telehealth service is best illustrated by some of the health professionals that use the service. Dr Wilton Braund, an Endocrinologist specialising in the treatment of Type 1 diabetes, uses the Vidyo system from his Adelaide clinic for telemedicine sessions with patients who receive onsite supervision from Lynette Flavel, a registered nurse practitioner and diabetes educator at Mildura Private Hospital. Sitting in on one of Dr Braund's video consults Professor Colin Carati, the Assistant Dean for Information and Communications Technology at the School of Medicine at Flinders University was "extremely impressed by the physical consulting setup [and] the thought and care that had been put into the software setup". Local GP Dr Gerald Murphy commenting on the ease of use of the system, saying "It is absolutely fantastic; about 50% of the work that takes our patients out of town can be done through video conferencing". Another of the local GPs, Dr Dennis Joyce, noted "I can really see a need for this with Rheumatologists ... for new patients this (telehealth) system works well".



Many of the health professionals found an added benefit of the system has been the cross-fertilisation of knowledge between GPs and specialist practitioners during consultations. Dr Joyce again: "The only time we get to see specialists is when we are training ... [with this service] we are putting in our two bobs worth".

A steady stream of ideas for other applications for the Vidyo system are being discussed, and the system may well be expanded to service increased demand - a simple matter of applying more VidyoLine licences.

Troy Bailey, as part of his administration of LMML's telehealth video conferencing system, conducts an evaluation of patient experience of the service. Troy reports that patients surveyed on criteria such as standard of care, convenience, ease of access and willingness to participate again consistently rated high levels of satisfaction. "We see the use of this technology as vital in reducing the inequity of access that currently exists in our region. 85% of our GPs now have access to this resource ... the response we are getting is overwhelming - everyone thinks it is the future for rural medicine. LMML have found their service to be extremely cost effective, Troy Bailey again: "the cost/benefit analysis we have undertaken shows that our telehealth service not only makes health care provision available at places and frequencies never before seen, it also removes considerable patient costs and generates additional income for practitioners, a win win situation. We get patients into a telehealth consultation with their specialist and avoid anything up to a six month wait for them; we are often saving thousands of dollars for the patient, their community and the healthcare sector".

More Information

ALLOY
Phone:
1800 817 807
+61 3 8562 9000
Email:
sales@alloy.com.au
Web:
www.vidyo.com.au



VIDYO, Inc
www.vidyo.com.au

