

TELEHEALTH

An Alternative Method of Health
Services Delivery

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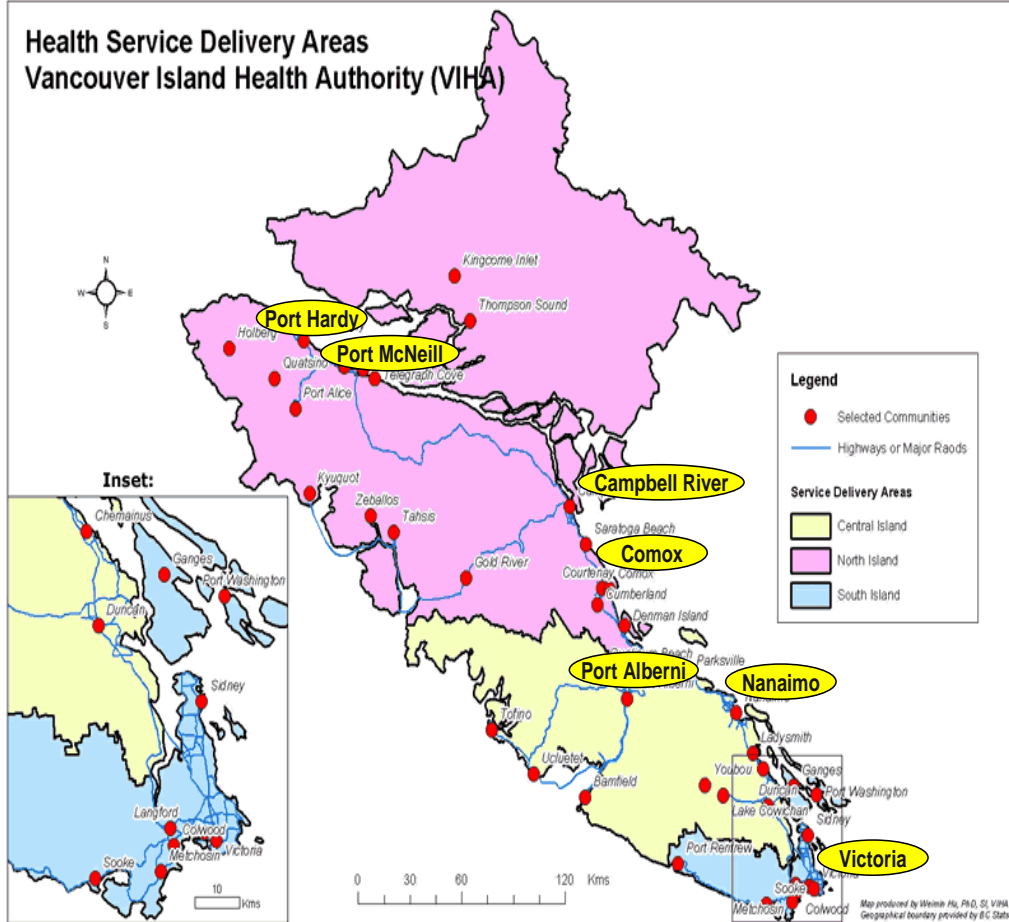
Objectives:

- *Provide an overview of Telehealth as a method of delivering health services.*
- *Review the Vancouver Island Cancer Centre videoconsultation experience.*
- *To gain an understanding of the challenges and opportunities of telehealth in the clinical setting.*

Definition:

- Telehealth - "use of communication & information technology to deliver health and health care services, information and education where participants are separated

Health Service Delivery Areas Vancouver Island Health Authority (VIHA)



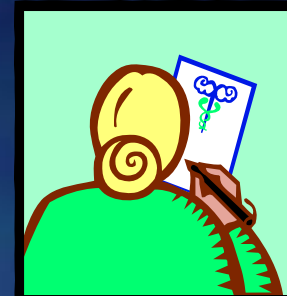
The options

- Traveling clinics- inefficient of time both to patients and physicians-often fun
- It is always easier to see patients in ones own setting- perhaps better– but what selective group of patients are then not being seen?
- THE UNMET NEED

The mind set

- Think about designing a system of seeing patients if you cannot physically touch them.
- It is not about whether this is really the same as having patients in the room-It is about reaching patients and groups that might not otherwise be reached with the same level of expertise.

Questions That Come Up ??



- Issues of Consent
- Issues of Liability
- Issues of Confidentiality, Patient Privacy, Security
- Issues of Quality –Physical Exam
- MSP billing- probably applies to those who asks- codes for Peds, GP's several surgical sub specialties- for IM- Nephro, Derm, and Rheumatology.

Confidentiality

- The IT people must not observe.
- Doing from home or other unprotected places causes a problem

Liability

- CMPA/ BC College position statement regarding use of teletechnology for clinical encounters with pts states
 - “ acceptable as long as the consultation follows standard of practice guidelines ”
- Cross jurisdictional issues – physician must be licensed in the province of the patient.

Confidentiality & Privacy

- Issues about IMIT people
“looking in”
- Consenting procedures
- Is the Network secure ? -skype



Billable- MSP

Telehealth Service” is defined as a medical practitioner delivered health service provided to a patient at a Health Authority approved, publicly-funded telehealth program, and live image transmission of those images to a receiving medical practitioner at another approved site, through the use of video technology. "Video technology" means the recording, reproducing and broadcasting of live visual images utilizing a direct interactive video link with a patient. In order for payment to be made, the patient must be in attendance at the sending site at the time of the video capture. Only those services which are designated as telehealth services are payable by MSP. Other services/procedures require face-to-face encounters. Telehealth services do not include teleradiology or tele-ultrasound, which are regulated by their specific Sectional Preambles

Technology

- Mobile user friendly video unit
- Integrated into clinical area
- Full functionality – far end camera control, peripheral devices – eg stethoscope, otoscope, camera



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Questions of the video

- What about that physical examination anyway??
- Are patients happy with it?
- Are physicians happy with it?
- Are the consultants (the people doing the video) happy with it?
- How good is that technology?
- How expensive?
- What about physician interaction?
- What about all that make up?



The PE- what does it do

- It does force an intimacy with the patient. Reaching out and touching
- Patients expect it?
- May allow physician a better estimate of performance status and ability to withstand therapies?
- In certain groups that the physical adds necessary information but may be larger in certain areas as the breast cancer and prostate cancer.



Physical Examination does it add today

- Looked up the literature on this. All standard texts talk about a careful systematic physical exam but none talk about what it adds when you have to add another series of investigations such as CT etc to the work up
- But:- Amer J Roen 145,833-37- P_xam vs CT in locally advanced Br Ca—Prospective- 49% had other disease and 56% had nodes not picked up by P_x.
- Melenoma-Melanoma Res 13:183-8 Apr 2003-Detection of local regional metastases- US sens of 92.2%, and spec 98.2% whereas P_x had sens of 51.3% and specificity of 90.9% (1395 patients with 2650 US and P_x



■ In a study attempting to assess the physical exam in its accuracy in the detection of cirrhosis- a large study (retrospective) looked at the PE in studies reported from 1966-2000— 1895 patients—Ten physical signs reported-There was a high sensitivity(75-98%) but low specificity 15-68% for histologically proven cirrhosis. Conclusion- PE of low sensitivity. BMC med informatics and decision making 1(1):6, 2001.



If doing telemedicine and detecting disease important

- One has to use more imaging studies than you might in an office if seeing patients face to face.
- By using imaging you will pick up more disease
- If we were to design a system today in our large country- would we design it with a physical exam?

The intimacy factor

- When you walk into a room you are a real person- patients can identify with
- Can they identify a screen individual??



Michael Smith Grant- Role out telehealth

- What are the Barriers to Telehealth-Readiness in the community?
- That there would be no difference in the satisfaction of patients with malignancy if seen face to face in the clinic or via video consultation.
- We also hypothesized that there would be no difference in physician satisfaction with the consults.

Readiness

- To assess readiness for teleoncologic consultation a) in the community and b) among care providing organizations.-
Focus Groups
- Expert informants from each community
– docs, nurses, admin.
- Technical Readiness:

Themes re readiness

- Pts-The overarching theme that emerged from interviews with key informants revolved almost exclusively around travel and the potential reduction by way of a teleoncology program.
- Medical profession, were somewhat guarded in their enthusiasm. Others noted shortcomings of Telehealth or Teleoncology programs but these could be overcome or 'worked around' and, regardless, would be outweighed by their potential benefits.
- Evident among care providers was the understanding that telehealth would undoubtedly change the nature of patient-physician consults.

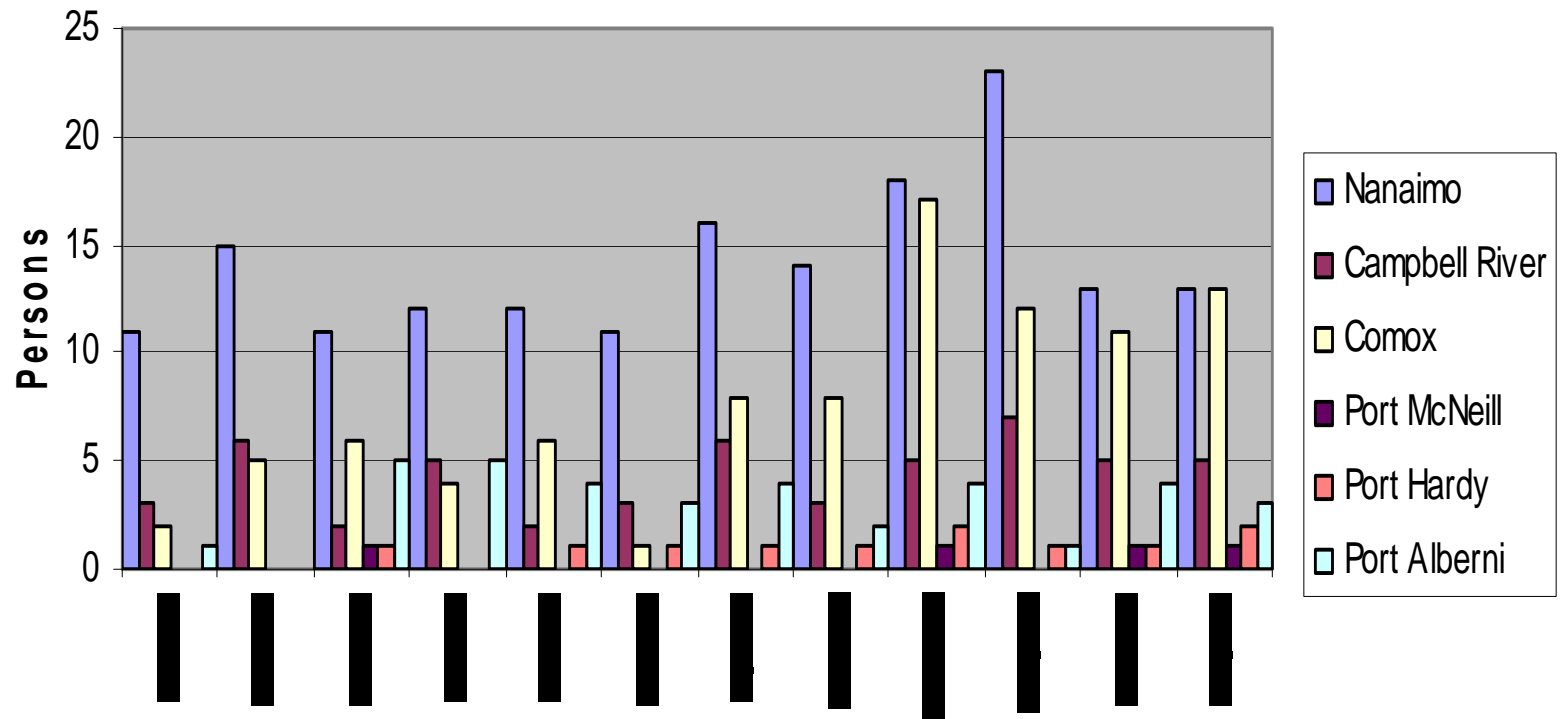
Themes- technical

- The most significant lesson learned related to the need to ensure the early involvement of senior leaders in Information Technology and Information Management within the organizations. Earlier engagement of the right people in the project may have resulted in a more timely resolution to some of the technical challenges experienced in this study. Completion of a comprehensive needs assessment which looks at structural and human factor needs is critical. Ensuring open and timely communication of all technical issues are keys to successful resolution.

The Study

	Patient Status	Cancer Site	Physicians	Locations
Face to Face	8 Follow Up 63 New Patient	63% Colorectal 14% Breast 13% lung 10% Other	79% Medical Oncologists 20% Radiation Oncologists 1% other	54% Nanaimo 21% Comox 17% Campbell River 8% Port Alberni
Video Consults Only 70 of 106 completed evaluation	62 Follow Up 8 New Patient	83% Colorectal 6% Lung 4% Breast 6% Other	87% Medical Oncologists 6% Radiation Oncologists 5% Other	56% Nanaimo 21% Comox 13% Campbell River 10% Port Alberni

TeleOncology Sessions Oct 07 - Sep 08



Patients seen in the year after the trial was closed.

	Nanaimo	Campbell River	Comox	Port Alberni	Port McNeill	Port Hardy	Total
# of Patients Post-study	165	48	91	35	4	9	352
Distance to Victoria (km)	110	267	225	195	463	502	

Phys--I did not feel it was necessary to examine the patient physically.

- F to F
 - 14 - Strongly disagree
 - 12 - Somewhat disagree
 - 8 - Neutral
 - 18 Somewhat agree
 - 16 - Strongly agree
- Video
 - 2 - Strongly disagree
 - 2 - Somewhat disagree
 - 3 - Neutral
 - 4 - Somewhat agree
 - 49 - Strongly agree

PHYS-I felt that I was able to convey the information to the patient adequately

- F to F
- 6 – Somewhat agree
- 64 – Strongly agree
- Video
- 1 – Somewhat disa
- Neutral
- 5 – Somewhat agree
- 53 – Strongly agree
-

I felt that I was able to obtain all the information

- F to F
- 1 – Neutral
- 9 – Somewhat agree
- 60 – Strongly agree
- Video
- 3 – Somewhat dis
- 6 – Somewhat agree
- 51 – Strongly agree
-

Phys-I was satisfied with the clinical encounter

- F to F
- 9 – Somewhat agree
- 61 – Strongly agree
- Video
- 1 – Strongly disagree
- 1 – Somewhat disagree
- 2 - Neutral
- 5 – Somewhat agree
- 51 – Strongly agree
-

I did not experience any problems or technical difficulties with the video system functions.

- 2 – Strongly disagree
- 8 – Somewhat disagree
- 1 – Neutral
- 3 - Somewhat agree
- 46 – Strongly agree
- 16% -17% of the time there were some technical problems

I could talk to the physician or counselor/ social worker
easily and openly

- F to F
 - 4 – Somewhat agree
 - 67 – Strongly agree
 - 100%
- Video
 - 1 - Neutral
 - 1 – Somewhat agree
 - 54 – Strongly agree
 - 2 – Patient unable to complete survey
 - 98%

I felt that I was able to obtain all the information I needed

- F to F

- 1 – Neutral

- 3 – Somewhat agree

- 67 – Strongly agree

- 98.5%

- Video

- 2 – Somewhat agree

- 54 – Strongly agree

- 2 – Patient unable to complete survey

- 100%

I felt I was able to “connect”

- F to F

- 3 – Neutral

- 6 – Somewhat agree

- 62 – Strongly agree

- 96%

- Video

- 1 – Neutral

- 2 – Somewhat agree

- 53 – Strongly agree

- 2 – Patient unable to complete survey

- 98%

The differences?

- Physicians selected themselves out- 14 to 8?
- More consults in the first group- more follow ups in the video
- Physicians may also have selected the patients they did not likely have to examine.

Evaluation Domains	Percent Satisfied Patients	Percent Satisfied Physician
Ability to Communicate Easily & Openly	93%	98%
Comprehensiveness of Information provided	93%	95%
Privacy & confidentiality maintained	90%	98%
Technical quality	89%	81%
Ability to Connect with provider/patient	90%	95%

Table 2: Patient/Provider Satisfaction with Components of Video consultations:

Estimated Costs to patients (mean)/per visit

- F to F

- \$234.11

- Video

- < \$10.00

- Most indicated no cost

And it's Green

82 patients seen by telehealth	Travelled 2570 Km.	7571 kg/km of Greenhouse emissions.
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Conclusions

- Physicians have picked which group they feel most comfortable with for telehealth
- Patients like the experience
- Costs borne by patients are not insignificant, and are minimized with this technology

Next steps

- Is this the way to do business?

Specialty Consultation

- Most of the specialists are concentrated on the south Island.
- Family Physicians cannot “rub shoulders with the specialists in the coffee room
- Can we remake this by offering subspecialty medicine consultation on a rotating basis.

Background

- FP's poled (needs analysis) and was invited to all island FP meeting x2
- Specialists said they would do it
- SSPS grant obtained to pay specialists for the time in the "coffee room"

Background

- Rotation for one hour on a weekly basis of Oncology, Nephrology, Respiriology, Cardiology, Hematology, Endocrinology and GI
- To meet via telehealth up and down Island on Tues am at 8– several times tried but nothing good for all

Results

- September 2008 started.
- 6 sessions- NO ATTENDANCE

Regroup

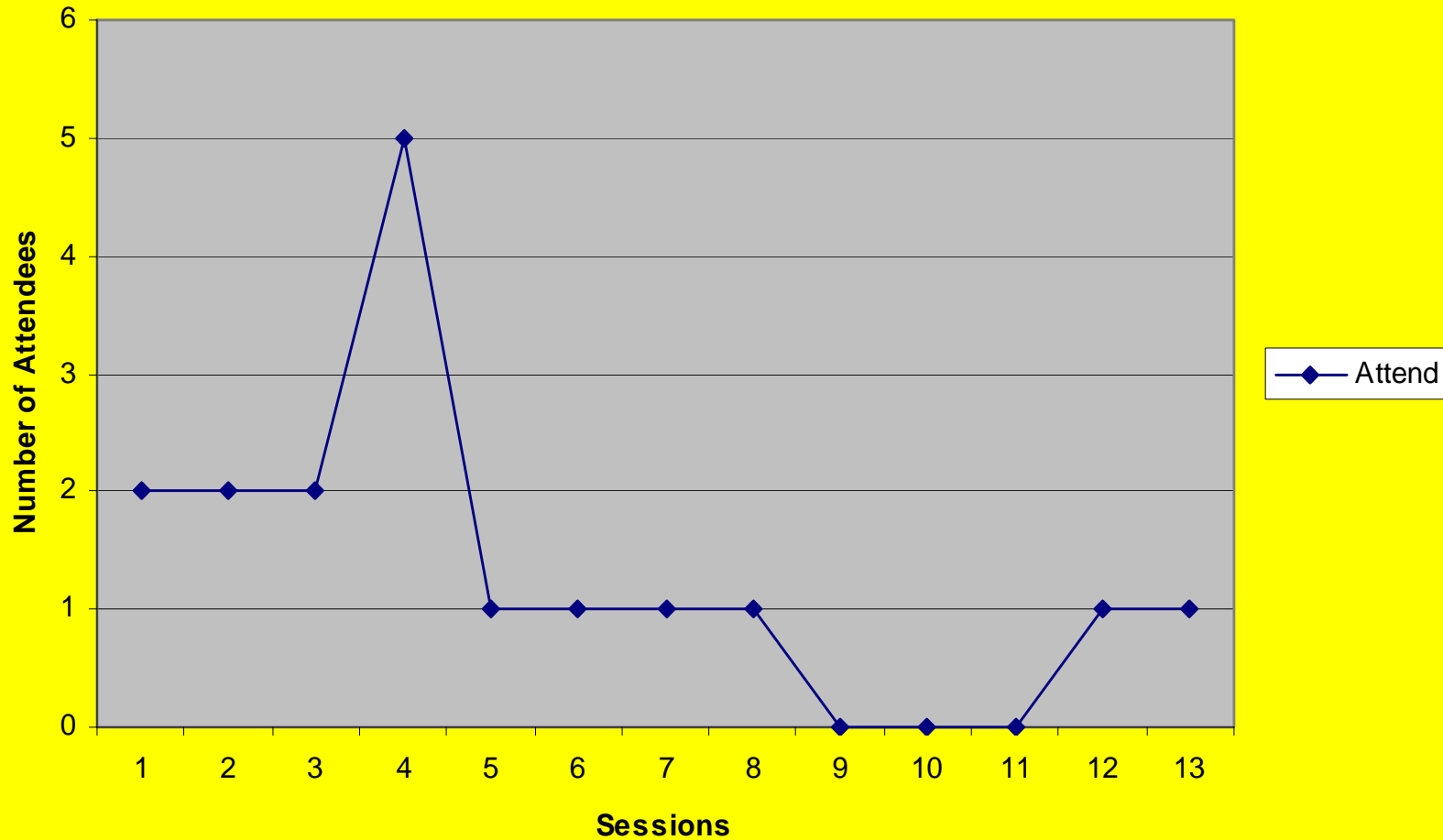
- Allied with the Integrated Health Network of physicians and IT.
- Again spoke to FP council
- Flyers sent out ahead.
- Looked for a time no one on the net.
- Monday- 8 AM started in Jan-2009

	<u>Time</u>	<u>Day</u>	<u>Subject</u>	<u>Attend</u>	<u>Places</u>	<u>Case discussed</u>
<u>January 12, 2009</u>	<u>8-9 AM</u>	<u>Monday</u>	<u>Oncology</u>	<u>2</u>	<u>Comox</u>	<u>3</u>
<u>January 19, 2009</u>	<u>8-9 AM</u>	<u>Monday</u>	<u>Hematology</u>	<u>2</u>	<u>Comox</u>	<u>5</u>
<u>January 26, 2009</u>	<u>8-9 AM</u>	<u>Monday</u>	<u>Nephrology</u>	<u>2</u>	<u>Eagle park Tofino</u>	<u>?</u>
<u>February 2, 2009</u>	<u>8-9 AM</u>	<u>Monday</u>	<u>Respirology</u>	<u>5</u>	<u>2-up is 2 SPH 1?</u>	<u>General discuss</u>
<u>February 9, 2009</u>	<u>8-9 AM</u>	<u>Monday</u>	<u>GI</u>	<u>1</u>	<u>?</u>	<u>A few</u>

<u>February</u> <u>16,2009</u>	<u>8-9</u> <u>AM</u>	<u>Monday</u>	<u>Oncology</u>	<u>1</u>	<u>?</u>	<u>A few</u>
<u>February</u> <u>23, 2009</u>	<u>8-9</u>	<u>Monday</u>	<u>Endocrinology</u>	<u>1</u>	<u>?</u>	<u>A few</u>
<u>March 2,</u> <u>2009</u>	<u>8-9</u> <u>AM</u>	<u>Monday</u>	<u>Cardiology</u>	-	-	<u>Card no</u> <u>show</u>
<u>March 9,</u> <u>2009</u>	<u>8-9</u> <u>AM</u>	<u>Monday</u>	<u>Hematology</u>	<u>0</u>	-	-
<u>March 16,</u> <u>2009</u>	<u>8-9</u> <u>AM</u>	<u>Monday</u>	<u>GI</u>	<u>0</u>	-	-

<u>March</u> <u>23, 2009</u>	<u>8-9</u> <u>AM</u>	<u>Monda</u> <u>y</u>	<u>Nephrology</u>	<u>0</u>	-	-
<u>March</u> <u>30, 2009</u>	<u>8-9</u> <u>AM</u>	<u>Monda</u> <u>y</u>	<u>Respirology</u>	<u>1</u>	-	<u>Resp</u> <u>no</u> <u>show</u>
<u>April 6,</u> <u>2009</u>	<u>8-9</u> <u>AM</u>	<u>Monda</u> <u>y</u>	<u>Cardiology</u>	<u>1</u>	<u>Ladysmit</u> <u>h</u>	<u>Card</u> <u>no</u> <u>show</u>
<u>April 13</u>	<u>8-9</u> <u>AM</u>	<u>Monda</u> <u>y</u>	<u>Endocrinology</u>	<u>cancel</u>	-	-

Attendance



Conclusions

1. Telehealth used in this manner is not an effective way to connect with Family Practitioners.

- Although advertised no other professionals came to the sessions.
- Family Practitioners want the connection with Specialists as noted in the email surveys done previously but probably wish it when the topic is hot, and not before or after the fact. This likely relates to the pressures of work.
- The lack of infrastructure support as given in SSPS grants does not allow maximization of grants and tends only to reward conventional connections.