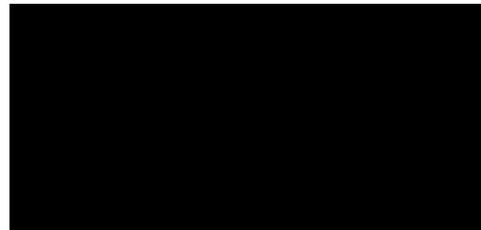# Teledermatology: Fleshing out the Benefits

Philip Ramirez

Introduction

- FQHCs are some of the most efficient methods of health care, able to bring healthcare to Medically Underserved Areas (MUA).

- Access to specialty care is still a problem for most MUAs

- Telehealth has the potential to address this problem with technology currently present in Community Health Centers (CHCs).

Background

- Telehealth is nothing new
  - Dutch physician had electrocardiographs carried to him by horseback – 1905
  - 1920 radiologic consults completed between ships and islands to doctors on the mainland.
  - US begin transmitting radiographs in 1950's

Background (Cont'd)

- Three forms of Telehealth
  - 1. <u>Store-and-Forward Telehealth (SFT)</u>: objective data is digitized, stored on a server, and sent the to a specialist for assessment on their own timeline.
  - 2. <u>Live-Interactive (LI)</u>: consults via web-based communications.
  - 3. <u>Hybrid</u>: SFT and LI may be combined
- SFT teledermatology was used for this study due to its asynchronous nature
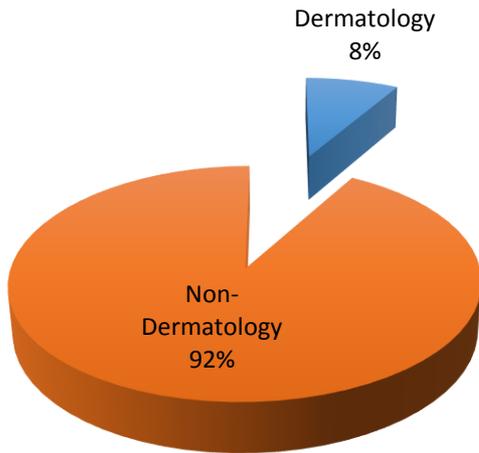
Methodology

- Next Gen Electronic Health Records were used to identify encounters resulting in an ICD-9 dermatologic code from Jan 1, 2014 – Jun 30, 2014.

- ███████ administrative personnel provided average cost to ██████████ per visit and number of dermatology referrals for the given timeframe. They also provided average administrative time for referrals.

- Research papers were used to identify costs of dermatology visits and teledermatology consults.
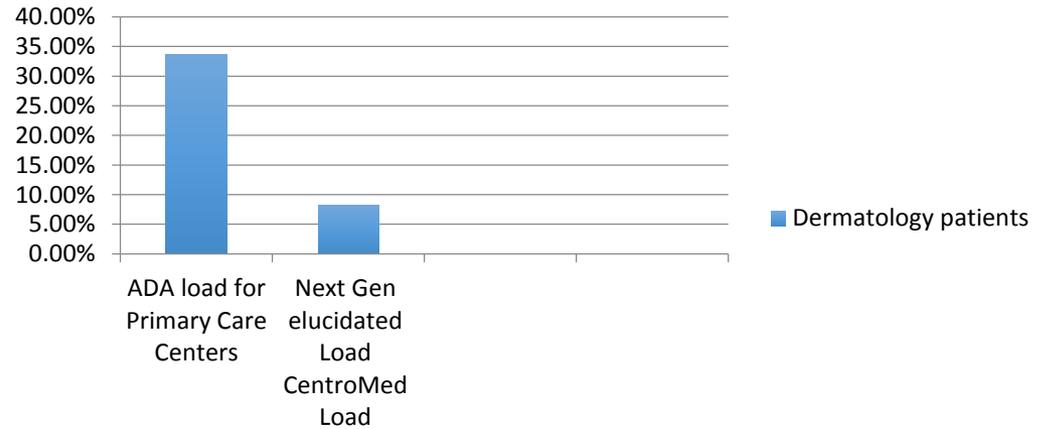
Results

- The dermatologic load for ███████████ was almost 4 x's less than the load determined by the American Dermatologic Association.

- <u>Regardless</u> of this fact the amount of potential money ███████████ could save per year is ~ $70,000.00.

- Administrative time for ███████████ would equate to ~80 hrs of extra time per year.

- Time spent by dermatologists on patient care if all patients with a referral and those requiring a second visit for a dermatologic issue used SFT a a time savings of ~160 hrs per year.

Results (Cont'd)

Visits with Dermatology ICD-9 codes compared to all other visits

Dermatology
8%

Non-Dermatology
92%

Dermatology patients

- 40.00%
- 35.00%
- 30.00%
- 25.00%
- 20.00%
- 15.00%
- 10.00%
- 5.00%
- 0.00%

ADA load for Primary Care Centers

Next Gen elucidated Load CentroMed Load

■ Dermatology patients

Results (Cont'd)

Monetary Costs	Number	Cost ($72.00/visit, *$93.09/clinical dermatology visit)	Cost if teledermatology used ($38.00/patient [7])
Patient's with repeat visits resulting in ICD-9 coding	1,007	N/A	$38,266.00
Repeat visits resulting in ICD-9 coding	1495	$107,640.00	One f/u visit for continuity of care = $0.00
Repeat visits > 1 resulting in ICD-9 coding	488	$35,136.00	Third visit avoided -$35,136.00
Referrals	695	*$64,697.55	($26,410.00 - $64,697.00) = -$38,287.00
		Total Financial Cost	-$35,157.00

Results (Cont'd)

Temporal Cost	Number	Time dermatologist spends on clinic visit (24.4 min/patient [7])	Time dermatologist spends on SFT consult (7.2 min/patient [7])	Administrative time spent on traditional dermatology referral (80% of referrals require ~ 52.5 min, 20% require 17.5 min)	Administrative Time spent for SFT operations (20 min per patient and referral [7])
Patients	1007	N/A	7,250.4 min	N/A	20,140
Referrals	695	16,958 min	(5,004 min − 16,958 min) = -11,954 min	31,620 min	(13,900 min - 31,620 min) = -17,720 min
		Time spent by Dermatologist if utilizing SFT	**-4,703.6 min**	Administrative Time Spent if using SFT for dermatology	**2,420 min**

Discussion

- Findings suggest teledermatology would greatly benefit ███████ by benefiting their constituents.

- The amount of time necessary for operations would be miniscule compared to the money saved and benefits to the patients.

- Cautious optimism should be drawn from this study because it is a simplistic approach to a complicated matter.

- ███████ may benefit from future projects exploring telehealth so they can remain a leader in innovations in the rapidly evolving healthcare climate.

Recommendations

- Design a study more relevant to the patient needs (i.e. telepsychology) for future PCLP scholars to assess.

- Use University resources and philanthropic entities to trial telehealth practices.

- Utilize models set-up in California to construct these models for study.

- Use California laws to lobby government officials for changes to payment schemes.

Conclusion

- Teledermatology shows a potential future for expanded telehealth practices in the Community Health Care setting.

- Future research projects might benefit ███████ as the evolution of healthcare allows for telehealth reimbursements in order to remain a leader in healthcare innovation.

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