



Medical Conditions Appropriate for Telemedicine in Primary and Urgent Care: A Literature Review and Survey

Yodit Beru, MPH

George Washington University School of Medicine
& Health Sciences

Aetna/National Medical Fellowships Primary Care Fellows Program
June 4, 2015

Introduction

- American Telemedicine Association is the leading international resource and advocate for promoting the use of advanced remote medical technologies
- Diverse membership of individual providers, healthcare institutions, companies and other organizations interested in deploying telemedicine
- Mission includes:
 - Educating and engaging government, payers and the public in telemedicine
 - Clearinghouse of information and services
 - Promoting research, education and innovation

Introduction

- Telemedicine management of the patient may involve:
 - Direct medical care
 - Diagnosis and development of a treatment plan
 - Triage and referral of the patient to obtain additional information for a final diagnosis and/or treatment
- December 2014 – Practice Guidelines for Live, On Demand Primary and Urgent Care released



Methodology

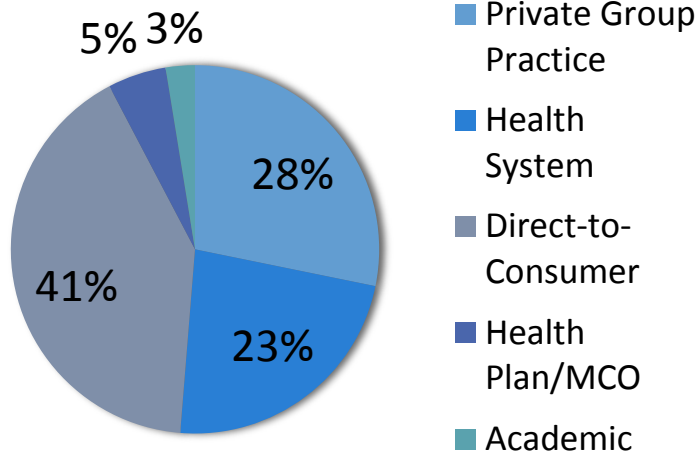
Literature Review: Review of published randomized controlled trials, controlled and observational trials between 2010 and 2015 using keywords “telemedicine,” “telehealth,” “mHealth,” “eHealth,” “digital health” and a list of common medical conditions seen in primary care. The literature review is currently underway and ongoing; selected findings are presented.

Survey: 200 organizations and companies involved in providing telemedicine services were sent the survey to identify the most common conditions treated via phone and/or video-based encounters in primary and urgent care settings. Survey domains/topics included:

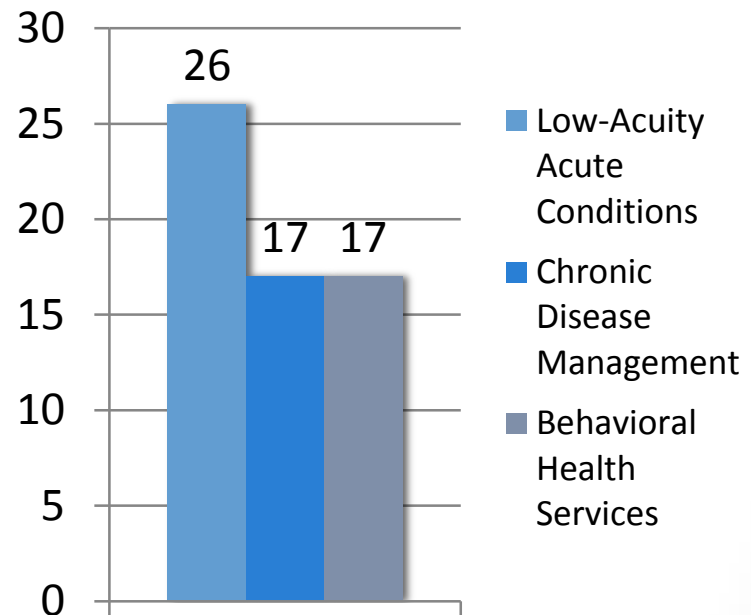
- Services Provided
- Volume of Services
- Provision of telemedicine services (video-based, audio only or both)
- Electronic Prescribing

Findings – Survey (n=39)

Type of Provider



Services provided



Findings – Literature Review

	Literature Review		Survey Results	
	Video-based?	Audio/Phone ?	Video-based?	Audio/Phone ?
Assessment of minor wounds	✓ (1)	No evidence	19 (48.7)	1 (2.6)
Burns (e.g., minor, sunburn)	✓ (2, 3)	No evidence	17 (43.6)	1 (2.6)
Influenza (uncomplicated)	No evidence	✓ (4, 5, 6)	14 (35.9)	2 (5.1)
Urinary tract infections (uncomplicated in non-pregnant women and in the absence of vaginitis)	✓ (7)	✓ (8)	17 (43.6)	2 (5.1)
Common rashes (e.g., contact dermatitis, shingles)	No evidence	No evidence	20 (51.3)	2 (5.1)
Allergic rhinitis	No evidence	No evidence	17 (43.6)	3 (7.7)
Sinusitis (uncomplicated)	No evidence	No evidence	16 (41.0)	2 (5.1)
Acute Conjunctivitis (e.g., uncomplicated viral or allergic)	No evidence	No evidence	15 (38.5)	2 (5.1)
Constipation	No evidence	No evidence	15 (38.5)	3 (7.7)
Acid Reflux	No evidence	No evidence	13 (33.3)	3 (7.7)

Conclusion and Recommendations

Survey:

- Many organizations currently providing telemedicine for a wide variety of common primary and urgent care medical conditions
- Majority of organizations provide video-based telemedicine services
- Most common medical conditions seen by survey respondents were common rashes, assessment of minor wounds, uncomplicated rash

Literature Review:

- Few evidence-based studies qualify for review between 2010 and 2015
- Existing evidence seems to favor audio/phone-based management
- Additional 14 medical conditions will be reviewed

Acknowledgements

- Aetna/NMF Primary Care Fellows Program
- George Washington University School of Medicine & Health Sciences
- American Telemedicine Association & Jordana Bernard

References

1. Van Dillen, C., Silvestri, S., Haney, M., Ralls, G., Zuver, C., Freeman, D., . . . Papa, L. (2013). Evaluation of an off-the-shelf mobile telemedicine model in emergency department wound assessment and management. *Journal of Telemedicine and Telecare*, 19(2), 84-88.
2. Holt, B., Faraklas, I., Theurer, L., Cochran, A., Saffle, J.R. (2012). Telemedicine use among burn centers in the United States: a survey. *Journal of Burn Care & Research*, 33(1), 157-62.
3. Turk, E., Karagulle, E., Aydogan, C., Oguz, H., Tarim, A., Karakayali, H., Haberal, M. (2011). Use of telemedicine and telephone consultation in decision-making and follow-up of burn patients: Initial experience from two burn units. *Burns: Journal of the International Society for Burn Injuries*, 37(3), 415-419.
4. Eppes, C.S., Garcia, P.M., Grobman, W.A. (2012). Telephone triage of influenza-like illness during pandemic 2009 H1N1 in an obstetric population. *American Journal of Obstetrics and Gynecology*, 207(1), 3-8.
5. North, F., Varkey, P., Bartel, G.A., Cox, D.L., Jensen, P.L., Stroebel, R.J. (2010). Can an office practice telephonic response meet the needs of a pandemic? *Telemedicine Journal and E-Health*, 16(10), 1012-1016.
6. Spaulding, A.B., Radi, D., Macleod, H., Lynfield, R., Larson, M., Hydeke, T., Dehnel, P., DeVries, A.S. (2013). Satisfaction and public health cost of a statewide influenza nurse triage line in response to pandemic H1N1 influenza. *PLoS One*, 8(1), e50492.
7. Blozik E, Sommer-Meyer C, Cerezo M, von Overbeck J. (2010). UTI in women. Consider telemedical management. *BMJ*, doi: 10.1136/bmj.c1464.
8. Blozik, E., Sommer-Meyer, C., Cerezo, M., von Overbeck, J. (2011). Effectiveness and safety of telemedical management in uncomplicated urinary tract infections. *Journal of Telemedicine and Telecare*, 17(2), 78-82.