Opioid use Treatment via Telemedicine: Treatment Options for Rural Maine

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Abstract

The ongoing opioid crisis has overwhelmed the traditional opioid use disorder (OUD) treatment delivery model in rural communities. The treatment process in rural communities has been especially hard hit as geographic and financial barriers limit service capacity. Telemedicine, or medicine delivered via remote means, has been proposed as a potential solution to the lack of conventional opioid treatment resources in rural Maine. Current legalities in the US prohibit telemedicine being used to prescribe opioid agonist drugs, and insurance reimbursement for telemedicine remains a major barrier. This qualitative content analysis looks at the existing research on telemedicine's treatment efficacy for use with OUD as well as the logistical strengths and challenges inherent in the implementation of telemedicine for rural communities. Peer reviewed academic journal articles from the past five years were selected based on their inclusion of content directly related to remotely delivered OUD treatment. These findings expose the limited data available on telemedicine as an independent OUD treatment modality, but also highlight the strengths of using telemedicine in support of traditional care.

Introduction or Background

Opioid drug use has been one of the most widespread drug epidemics in American history. Estimates range to 72,000 deaths in 2017 alone (NHTSA, 2018). In the state of Maine, the effects of opioid drugs have been especially hard felt. The rate of opioid deaths in Maine surpassed automobile accidents in 2012, and reached nearly twice the national average in 2013 (Diomede, 2013). One method to increase access for rural Mainers with opioid use disorder is the use of telemedicine as a treatment delivery modality (Cairns, 2018; Kaploff, 2018; Perry, 2018). Telemedicine is defined as any medical service where there is a physical distance between the provider and patient (Winston, 2003).

Research Question

An inductive content analysis was used to analyze the existing academic and professional literature relevant to the research question; what are the strengths and barriers to the application of telemedicine as an intervention modality for substance use disorder in areas of rural Maine affected by the opioid epidemic? To answer this question in totality two major areas needed to be addressed; treatment efficacy, and logistical feasibility. A complete diagram of the expected codes is included below, as well as the eventual thematic framework.

Methods

Inductive Content Analysis
- This research project has been IRB reviewed, but is not IRB approved due to being "non-human" research.
- Inclusion/Exclusion Criteria for articles
  1. Peer reviewed professional journal articles.
  2. Published within the past ten years, or 2009-present.
  3. Subject matter directly related to opioid use disorder (OUD) treatment via remote means (telemedicine).
  4. Subject matter directly related to substance use disorder treatment via remote means.
- All Articles were sourced from the University of Maine's electronic library system using the following key word search:
  - Tele + opioid
  - Telemedicine + opioid use disorder
  - Telemedicine + opioid
  - Telebuprenorphine + opioid
  - Tele + substance use disorder
  - Tele + substance use treatment
- A further six articles were sourced from reputable journalism publications as the articles reported on the current, unfolding political and legal changes which are critical to the adoption and effectiveness of telemedicine OUD treatment.
- Data analysis was completed using an excel spreadsheet organized by the expected coding, for the initial review. Coding and Thematic Frame’s shown in the tables to the right.
- A second review was used to create an inductive thematic framework
- A third review was used to ensure accuracy.
- >29 of the initial 40 articles ultimately matched all inclusion criteria and relevant subject matter.

Results

• Telemedicine may not reduce costs for the patients as has been suggested (Huskamp et al., 2018; Ingred, 2013).
• Recent changes in Medicare reimbursement have allowed for telemetry to be reimbursable, but only if the patient lives in a "rural" area which must be determined by the Medicare Office of the Actuary (Mahmoud & Vogt, 2018).
• Telemedicine in Northern Ontario saves patients an estimated $25 million in annual travel expenses (Laffelle et al., 2018).
• The majority of articles promote the utilization of telemedicine for OUD being delivered via secure facilities citing the Ryan Haight Act. This was put in place following the tragic death of Ryan Haight who overdosed as the result of ordering pharmaceuticals from a doctor he had never met, over the internet (Weintrub et al., 2018).
• Treatment outcomes are noted as comparable or improved, in terms of clean urinalysis, retention, and medication compliance compared to traditional care (Boudreau, Haskins, Harraison, & Bernstein, 2015; Campbell et al., 2014; Ebl et al., 2017; Moore et al., 2013; Raktja et al., 2016; Ruetsch, Thaci, McPheron, & Caccilida, 2012; Schwager, 2012; Weintrub et al., 2018).
• Three articles further note that OUD patients receiving treatment via telemedicine are more likely to voluntarily participate in additional treatment, such as 12 step support groups (Huskamp et al., 2018; Ruetsch et al., 2012; Zheng et al., 2017).
• The next major drawback noted with telemedicine use for OUD treatment delivery is the lack of long-term data.

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Discussion

Despite the limitations in the current quantity of data, advances in telemedicine are developing rapidly. Based on the available data at the time of this content analysis, it appears that the American ideal of telemedicine treatment delivered via your mobile phone is still years off. However, telemedicine treatment of OUD, when delivered at secure facilities, as a supplement to peer support, medication management and physical healthcare is a current reality and proven approach. The advances in technology and growth of telemedicine in other countries should be seen as a cautious sign of hope, and while there is unlikely to be any single “cure” to the opioid epidemic, telemedicine is another quality tool for providers to utilize. While there are more questions yet to be answered, telemedicine for OUD treatment stands as a viable option that deserves further study.

References

[References are listed here with proper citations and links to the original sources.]