Integration of Dental and Medical care through Co-Locations

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignment

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STS Research Paper

An apple a day keeps the doctor away, but brushing your teeth twice a day keeps death away. Global Burden of Diseases declared that oral diseases are the number 1 problem, affecting 3.9 billion people (E. Mertz 2016). According to recent studies (cf.Mayo Clinic Staff 2017; Marshfield Clinic Health System), dental health is more important than ever thought before and people are now arguing that dental care should be included in federal medical insurance plans. Studies have shown a strong link between gum disease and an increased risk of developing heart disease or having a stroke. Plaque buildup in the mouth can get into the bloodstream causing inflammation and making blood more likely to clot. Studies refrain from saying there is a direct link because the stakeholders that finance these industries do not want the medical and dental field to merge because they would lose profit.

I will explore co-locations as an exploratory study on integrated care. Despite the immense amount of research and conclusive results that good dental care is vital to good overall health, oral care is still both separate and underappreciated compared to other medical care. By incorporating the mouth into general health, many illnesses and problems can be prevented/cured much easier. Oral care is often neglected because an emphasis on oral hygiene is not placed by society as heavily as the importance of medical care. It is often taken for granted. There are many stakeholders in this problem: patients, doctors, insurance companies and the government. Patients want affordable and accessible care, doctors want what's best for their patients while getting compensated fairly, insurance companies want to make money and the government provides federal insurance but they also have to care about the health of their citizens. Dental and medical care insurance are on different plans and nearly a quarter of people are not covered by a dental plan.

Separation

The separation of dental and medical care started when medical schools were established and dentistry was excluded (K. A. Atchison & J. A. Weintraub, 2017). Insurance companies used this divide to their advantage by creating two separate types of insurances. Insurance companies discovered that people would buy dental insurance but rarely use it, this benefits the companies because then they make a lot more money versus medical insurance which is used regularly: "The presence of dental coverage does not automatically result in the use of dental service" (K. A. Atchison & J. A. Weintraub, 2017). The exclusion of a body part and the separation of health care was an intentional ploy to take advantage of civilians and exacerbated by greedy insurance companies. In recent years oral health has become more important to people and they are seeing that oral and medical health is one and the same (K. A. Atchison & J. A. Weintraub, 2017).

Congresswoman Alexandria Ocasio-Cortez is a big advocate for dental care, sharing her own experiences and struggle to get dental care before becoming a United States Congresswoman (A. Werner 2020): "DENTAL HEALTHCARE IS HEALTHCARE". AOC struggles with getting orthodontic care and wasn't able to until she became a Congress woman. She is pushing for dental care to become part of medical care because it is not for aesthetics, "not having your bite lined up correctly can be painful and contribute to other health problems" (Alexandria Ocasio-Cortez, Instagram 2020).

Currently Medicaid mostly provides only children with dental insurance (Medicaid "Dental Care"), and while that is a great start and allows children to develop good habits while young, it excludes all other ages from receiving the dental care they need. Oral hygiene needs to be instilled in children at a young age, this is why it is so important to have programs directed at providing dental care for children (Kleinberger, J. A., and Strickhouser, S. M. 2014)

Inequality in dentistry

There is a connection between sociology and dentistry that has not been explored (Catherine Exley 2009). The inequality in dentistry is linked to poor medical and dental care in most countries, so it is the lower-class people who suffer from illnesses that can be easily prevented or advanced. This is important because it is a fundamentally racist system that was designed with this intent (Catherine Exley 2009). Co-locations aim to combat this problem by making general care more accessible for people. Health offices have started to implement programs that combat the inequality of insurance and lack of access to a good medical/dental plan. Catherine Exley (2009) discusses that those who most benefit from preventative treatment are the ones who have the most limited access to it. Society needs more than just better insurance to combat the inequality in dentistry.

Offices have created their own affordable payment program where a patient pays a set fee once a year and it includes many basic treatments, this is like an insurance plan that is only with this one facility. These programs include two cleanings, a set amount of emergency visits, and a full set of digital x-rays a year. This is to incentivize patients to stay with the same dental office and instill good oral hygiene habits into patients. These programs are mostly bought by patients who do not have dental insurance either because they cannot afford it or because they do not qualify for state aid. Dentists struggle to accept Medicaid because they risk their license if paper work is not filed correctly, these programs are a substitute for not accepting these programs, although not equal to fully free dental care. This program also combats the struggle that an individual has getting insurance. In America it is hard for a family to get insurance if it is not through a job or larger institution (state or federal).

There has been a power struggle over the knowledge of dentistry. Sarah Nettleton (1988) examines the development of the field and the fight for who was allowed to control the knowledge. Nettleton (1988) argues that it was the dentists that separated the mouth from the body, in order to increase oral knowledge and have power over the field. The mouth is the connection between the body and the outside world and as epidemics developed and spread people further separated the mouth and the body in the hope of preventing illness, althoughoral care was greater valued at this time because of this (Nettleton 1988). The authors of a study made the claim that a major problem in oral care is due to the lack of political leadership and health care policies (Harnagea, H., Couturier, Y., Shrivastava, R., Girard, F., Lamothe, L., Bedos, C. P., & Emami, E. 2017), it is low priority on their political agenda and this has hindered the integration of health care. It comes down to lack of public education, for instance paediatricians with "low level of competencies" were five times less likely to implement oral healthcare into their routine than those with a higher level (Harnagea, H., Couturier, Y., Shrivastava, R., Girard, F., Lamothe, L., Bedos, C. P., & Emami, E. 2017). These problems are from lack of knowledge on all levels of the system: political to health care professionals to patients. If the power struggle was removed it may increase the implementation rate of co-locations because in the end of the day the main goal should be to improve people's health.

Integration

The lack of comprehensive medical insurance can be solved by bridging the gap between dental and medical care through integration. A proposed method of integrating is co-locations. In the North Carolina Medical Journal Co-location and Closer Integration of Medical and Dental Providers was discussed (K.A. Atchison & J.A. Weintraub 2017), their plan is to put multiple preventative care procedures in the same facility, allowing the patient easy access to care and

integrating electronic health records (EHR). Co-locations are a way to make preventative care more accessible by providing mammograms, flu shots, colonoscopies, and dental hygiene check-ups all in the same building. The American Dental Association has declared that the dentist's "expertise and network" qualifies (K.A. Atchison & J.A. Weintraub 2017) them to provide medical screenings while the patient is in their chair. Over the past couple of years there has been a push to have dentists provide medical care for smokers and diabetics during their annual dental appointments.

The co-location integration theory has been implemented around the country and has been successful. The clinics had different methods from each other but all had "coordination of services within comprehensive systems of care" (McKernan, S. C., DMD MS PhD, Kuthy, R. A., DDS MPH, Reynolds, J. C., DDS MS, Tuggle, L., MPH, & García, D. T., PhD MPH. 2018). Numerous clinics accomplished this through EHR to "facilitate bidirectional referrals and flagging records of dental patients who have chronic conditions" (McKernan, S. C., DMD MS PhD, Kuthy, R. A., DDS MPH, Reynolds, J. C., DDS MS, Tuggle, L., MPH, & García, D. T., PhD MPH. 2018) and many clinics implemented a referral system where a primary care physician would perform oral examinations and would refer their patient for oral care if necessary. Integrating these medical professions under one roof streamlined the collaboration between a patient's doctors and limited mistakes. The clinics that participated in this study mainly focused on diabetes, EHR alleviates the pressure on the patient to confirm that all of their doctors know about their medical conditions and medications because they all had access to their file (McKernan, S. C., DMD MS PhD, Kuthy, R. A., DDS MPH, Reynolds, J. C., DDS MS, Tuggle, L., MPH, & García, D. T., PhD MPH. 2018). I could see this as a great way to lower the risk of being given conflicting medication that could cause life-threatening side effects. Along

with dentists being able to provide chairside medical evaluations, a program was started in North Carolina called *Into the Mouths of Babes (IMB)*. This "program trains medical providers to deliver preventive oral health services to young children insured by NC Medicaid" until the child is 42 months old (North Carolina Public Health 2020). The medical profession provides basic oral care: oral evaluation and risk assessment, counseling with primary caregivers and application of topical fluoride varnish (North Carolina Public Health 2020).

Preventative Care

Preventative health care is the way to save lives, countless illnesses can be cured just by "catching it early" and the best way to implement preventative care is through the integration of medical care. Some people only go to medical visits and some only go to dental appointments, this could be because of insurance or lack of funds, but frankly insurance companies are often too focused on money instead of the well-being of their client. New York State passed a law mandating that dentists must offer voluntary HIV screenings (K. A. Atchison, R. G. Rozier, & J. A. Weintraub 2018). By legally allowing qualified doctors to counsel their patients on general medical care, people would be able to take better care of themselves. This was implemented after the aids epidemic and helped prevent people from receiving the HIV care they needed because they were diagnosed too late. Other states could implement a similar program and expand it to include more c hair side examinations done by dentists.

When COVID-19 hit America in March 2020, there was a severe lack of doctors around the country, all hands were called on deck except for dentists. Dentists go through the same schooling required for a medical doctor and yet they are often disregarded. To integrate these industries would forever change the way healthcare is in this country.

Demographic

Co-locations are mainly implemented in rural areas of the country that are far from hospitals. There is a large disparity of oral health in rural areas due to dentist shortage, rate of poverty is higher, lack of transportation, lack of dental insurance, and it is hard to find a dentist that accepts Medicaid (Rural Health Information Hub. 2019). The idea of integrating medical and dental care into one facility reduces the systemic problems that arise with rural living and encourages people to seek help and decrease stigma against seeking treatment for mental health (Rural Health Information Hub 2018). If mental health specialists are located in a co-locations people are more likely see them as any other regular doctor and be more encouraged to seek help. If this is all in one facility it may influence insurance companies to cover mental health services.

It has been found that co-locations are favored among men, the younger generation and Medicaid patients (Advisory Board A 2017). Although women use co-locations, men prefer them more due to the ease and accessibility of care. Men spend 25% less on average on medical care when compared to women (Advisory Board B 2017). Millennials (aged 18 to 29) prefer this method of treatment because they value "affordability and convenience" (Advisory Board A 2017) when compared to people aged 30 to 49. Patients with Medicaid insurance prefer co-locations because their insurance is more readily accepted and costs are lower because fees would be doubled if they had to go to two separate offices (Advisory Board A 2017). Based on a study, patients are pleased with the care they receive at co-locations due to the friendly and compassionate staff (Maxey, H., Dr. 2015).

A more collaborative medical space could encourage people to value their overall health more. For the most part people only go to a doctor when they need to not regularly, if one facility

has multiple preventative care specialists/GPs then a patient can do a better job of staying on top of their health instead of finding the problem when it is hurting. A facility like this may be able to accept insurance better than an individual hence making care not just an option for wealthy people.

On the inside

The aim of co-locations is to encourage collaboration between the medical and dental fields. It could lead to technological advancements because they can adapt current technology from the other field to fit their needs. These facilities can house mental health professionals, dentists, hygienists, primary care doctors, and specialized doctors. They can also house preventative care treatments like ultrasound, colonoscopy, and pap smears. By including basic care treatments in the facility people will be more able to get access to the care they need.

Co-locations will be a place for learning; oral health curriculum will be included in the training for physicians, nurses, and physician assistants (Maxey, H., Dr. 2015). This curriculum includes information about dental diseases and important patient information. These locations can also serve as a residency program for dentists and people in school to be hygienists can do their rounds there during their clinical rotations (Maxey, H., Dr. 2015). These spaces foster a sense of collaboration and education.

The CDC did a study on co-locations across the country (CDC). These facilities did things slightly different from each other but their main goal was to share physical locations as well as organized systems of care that employ medical and dental professionals. Some facilities like Blackstone Valley CHC required dental patients to also see their primary care doctor at the clinic (CDC). Hamilton Health Center focused on treatment and care for patients with diabetes, and many other clinics in the studies focused on the referral aspect on co-locations (CDC). These

are successful programs that did encounter problems but a lot was learned and they were able to be improved.

I was fortunate enough to be able to attend a dental lecture hosted by the Santa Fe Group: Learning from Clinicians and Their Patients: Oral Health and Overall Health (April 20, 2021). The moderators were Judith Haber, PhD, APRN, FAAN and Larry Coffee, DDS and the presenters were Gwen Nichols, MD, Lisa Kennedy Sheldon, PhD, ANP-BC, AOCNP, FAAN, Matthew Cooper, MD, and Christopher J. Smiley, DDS. The non-dentist presenters shared stories about when a patient of theirs needed oral care but did not receive it for varying reasons. Oftentimes these patients had severe complications with their organ transplant or cancer treatment because they were not given the correct oral care. An infection in the mouth from chemo can go into the blood stream and cause the patient to become very sick, if this happens it may no longer be safe to administer chemotherapy. A presenter discussed that during his residency he worked with dental residents and they believed that it was a more well-rounded team. Dentists are experts just like cardiologists and their opinion needs to be taken into consideration. These professionals agreed that their ideal team would include a dentist when forming a treatment plan for a patient's care. These health care professionals are all advocating for co-locations where they can work with other professionals and improve patient care. Some presenters currently work in co-locations. I greatly enjoyed attending this conference and am looking forward to attending the next one, it will focus on integrating medical and dental care through insurance.

Discussion

While doing research on co-locations I had some questions about the specifics of the integration. The ADA, the medical board, doctors, dentist, and other healthcare professionals are

stakeholders in the integration of medical and dental facilities. Who would be in charge of making the rules and regulations for these spaces, would it be an existing entity or a completely new one? Does the integration of these fields mean making dental practices obsolete? A lot of these co-locations will have a hygienist on staff to do basic oral care and write the patient a referral to see a dentist if something is wrong, but dental offices rely on hygienists because that is how they are able to make the bulk of their income. I was able to speak to other students about their medical and dental habits and found that their opinions were consistent with the findings that young people prefer convenience over seeing a particular doctor. The future of dentistry may be in co-locations. There are numerous theories as to how to integrate medicine and dentistry, co-locations are being tested around the country in different communities. The integration of these fields can result in technological advancements, safer medical practices, and greater accessibility to care.

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