

A Qualitative Study of Extended Care Permit Dental Hygienists in Kansas

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Introduction

Access to oral health care is a long standing national problem, brought to the public eye by the first ever Surgeon General's Report on Oral Health, released in May 2000. This report identified the scope and impact of oral health disparities in America.

Since its release, there have been several more reports dealing with access and disparity in oral health care in the U.S.¹⁻⁴ Collectively, they highlight similar themes: that prevalence and severity of dental disease are linked to socioeconomic status and inadequate access, that oral diseases have a negative impact on quality of life and that poor oral health has an economic impact at the individual and national level.

National data suggests that the number of dentists is declining across the U.S. and the ratio of dentists to patients is decreasing.⁵ Similar to national data, the state of Kansas suffers from a mal-distribution of dentists which has resulted in numerous underserved areas. Of 105 counties in Kansas, 95, or approximately 90.5%, are designated as dental health professional shortage areas.⁶ As a result, organized dentistry is looking for solutions to addressing these barriers and be more responsive to the public, especially the needs of children. Kansas currently has 5 dental hygiene programs throughout the state, with 3 located in rural underserved areas. Graduation trends, nationally, have increased steadily with a projected increase of 36% through the years 2008 to 2018.⁷ Similarly, the number of graduates in Kansas has increased over the last 10 years with the addition of 3 newly accredited programs and expanded enrollment at existing programs. As a

Abstract

Purpose: Currently, 37 states allow some type of alternative practice settings for dental hygienists. This qualitative study was designed to explore the experiences of the Extended Care Permit (ECP) dental hygienist in the state of Kansas. As a first ever study of this workforce model, a qualitative research design was chosen to illuminate the education and experiences of extended dental hygiene practitioners in order to understand the impact ECP legislation has had on increasing the public's access to oral health care services and define the advantages and limitation of this model as one potential solution to access to oral care. Snowball sampling was used to identify study participants who were actively engaged in extended care practice. Nine subjects, which included one ECP consultant and eight ECP providers, participated in this study. Data obtained via personal interviews and through document analysis data were subsequently coded and thematically analyzed by three examiners. An independent audit was conducted by a fourth examiner to confirm dependability of results. Seven major categories emerged from the data analysis: entrepreneur dental hygienist, partnerships, funding, barriers, sustainability, models of care and the impact of the ECP. The findings of this study revealed that ECP hygienists are making an impact with underserved populations, primarily children, the elderly and special needs patients.

Keywords: Access to Care, preventive dental services, underserved/unserved, dental hygienist

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result, utilization of dental hygienists as a mid-level oral health provider was proposed as one solution to improved access in reports such as the Kansas Health Institute Workforce Survey.⁸ In 2003, Kansas passed legislation to expand the scope of practice for dental hygienists, and is 1 of 37 states that have statutes supporting direct access for dental hygienists.⁹ The Extended Care Permit (ECP) legislation allows dental hygienists to provide preventive services, to underserved and unserved populations in explicit locations, through an agreement with a sponsoring dentist (Table I). In 2007, the Kansas legislature passed an amendment to the

Table I: Description of the Kansas Statutes Relative to ECP I and ECP II Scope of Practice and Requirements

Statutes 65-1456 (f) and (g)	ECP I	ECP II
RDH with clinical practice in the past 3 years or an instructor at an accredited dental hygiene program for 2 academic years within the past 3 years	1200 hours required	1800 hours required
Sponsoring dentist agreement	X	X
Proof of Liability Insurance	X	X
General Supervision	X	X
Removal of extraneous deposit, stain and from the teeth to the depth of the gingival sulci	X	X
Topic anesthetic (certification required)	X	X
Fluoride	X	X
Oral hygiene Instruction	X	X
Assessment and referral	X	X
Other duties as delegated by sponsoring DDS	X	X
Advises patient or legal guardian that these are preventive services, not a diagnosis	X	X
Provides an assessment report to sponsoring DDS	X	X
Payment through DDS or other entity (no direct reimbursement)	X	X
Patients do not need any type of dental examination by a dentist prior to the ECP providing services.	X	X
Perform services with consent on children or adults that fall within the criteria specified by Kansas statute 65-1456(f)	X	X
Perform services with consent on adults that are developmentally disabled or over the age of 65 that fall within the criteria specified by Kansas statute 65-1456(g)		X
Six hours of CE in special needs or other training		X

ECP legislation to expand the settings and populations expanding the scope of practice for the ECP dental hygienist.⁹ There are currently 1,750 dental hygienists practicing in Kansas, with approximately 124 (7%) possessing an ECP.¹⁰ Of the 124 ECP providers, 43 have an ECP I and 82 have an ECP II. Each permit has specified requirements in order to apply for each certificate from the Kansas Dental Board (Table I). While these efforts have the potential to improve access to care, to date little is known about the impact of the ECP legislation.

The purpose of this project was to explore the experiences of Kansas ECP providers who are offering services to unserved and underserved populations. By doing so, the goal was to illuminate the stories of those with firsthand knowledge and experience in extended dental hygiene practice in order to understand the impact of ECP legislation in practice, the impact it has had on increasing the public's access to oral health care services in Kan-

sas and to define the advantages and limitations of this model as a potential solution to access to oral care in the state. Studying the outcomes of this ECP legislation allows for the evaluation of the results of this direct access model of preventive oral health care.

Methods and Materials

Qualitative methodology was used to explore the experiences of ECP dental hygienists currently practicing in the state of Kansas. This method allows for the examination of this new delivery of care model and can provide data for future research initiatives. This study was approved by the UMKC Social Science Institutional Review Board.

Purposeful sampling was used to ensure that the selection of persons would be appropriate for gaining deep understanding of the phenomena.¹¹ Specifically, snowball sampling was employed

as follows - a consultant hired to promote ECP legislation and who has been involved from the early stages of the development of the ECP provider initiative was recruited as the initial informant. This individual facilitated initial contact with active ECP providers, who then served as additional informants from which subsequent subjects were identified. Saturation of data was achieved through interviews with the consultant and eight ECP providers.

Multiple methods of data collection and data analysis, known as triangulation,¹¹⁻¹³ were utilized. Face to face interviews of the ECP providers using a digital recording device, field notes from the interviews, review of the ECP statutes and the primary investigator's (PI) personal experience as having been one of the originators of the ECP legislation served as data sources. Data gathered from interviews were transcribed verbatim by a transcriptionist. Member checking was accomplished by having participants verify accuracy of their transcribed data and reduce potential bias in interpretation. Once validated, the PI reviewed data several times to look for emerging patterns to code together.

Termination of further interviews occurred when saturation had been reached and no new information emerged. The PI forwarded the reviewed transcribed documents to 2 co-investigators who also reviewed the documents. To ensure dependability and credibility of the thematic analysis and resulting categories, a data audit was conducted independently by an individual who was not associated with data collection or data analysis. The auditor reviewed the broad scope of the data, as well as the deconstruction (unitized and coding) and reconstruction of the material. An audit trail combined with the audit analysis is an important step in ensuring the dependability and credibility of the data analysis.¹²

Seven categories emerged from the thematic analysis (Table II). To ensure dependability and credibility of the thematic analysis and resulting categories, a data audit was conducted independently by a fourth examiner. The auditor reviewed the broad scope of the data, as well as the deconstruction (unitized and coding) and reconstruction of the material. An audit trail combined with the audit analysis is an important step in ensuring the dependability and credibility of the data analysis.¹²

Results

The thematic analysis yielded 7 major emergent categories: 1) Entrepreneur RDH, 2) Part-

Table II: ECP Category Analysis, By Number of Total Responses

Category	Number
Entrepreneur RDH	97
Partnerships	71
Funding	36
Barriers	25
Models of care	131
Sustainability	22
Impact of ECP	39

Table III: Characteristics of Study Participants (n=8)

Gender	
• Female	8 (100%)
Age	
• 30 to 35	2 (25.00%)
• 36 to 40	1 (12.25%)
• 41 to 45	-
• 46 to 50	1 (12.25%)
• 51 to 55	3 (37.50%)
Ethnicity	
• Caucasian	8 (100%)
ECP Permit	
• ECP I	3 (37.5%)
• ECP II	5 (62.5%)
Location of ECP in Kansas	
• Northwest	1 (12.25%)
• Northeast	5 (62.50%)
• East Central	1 (12.25%)
• South Central	1 (12.25%)

nerships, 3) Funding, 4) Barriers, 5) Models of Care, 6) Sustainability and 7) Impact of an ECP.

Entrepreneur RDH

"I believe the ECP who is the leader, whether it's with a safety net clinic, or on her own, has to have a very rare set of skills as a trailblazer and an entrepreneur, meaning that she has to be very clear about her vision. She has to have a very good skill set to go in and convince people to do something new. She has to be able to sustain her own energy, while still dealing with barriers regularly."

Results from the data within the emergent category of Entrepreneur RDH yielded 4 main sub-categories: Pre ECP, Characteristics of a Successful ECP, Working Relationships with Sponsoring

Dentist and Legislation Requirements. The following details for the reader the information gleaned from the data analysis and resultant sub-categories.

Pre-ECP: The 8 ECP providers interviewed for this study have similar backgrounds and experience as clinicians. The majority worked in clinical practice for many years. Statements by these participants indicated that their desire to apply for and use an ECP was driven by their need to feel some satisfaction for giving back and making a difference to the unserved and underserved populations. Table III provides demographic information of the ECP providers in this study.

Characteristics of a Successful ECP: Having worked in private practice settings for most of their professional careers, participant indicated a need to develop additional skills that would enable them to expand themselves outside the traditional fee-for-service private practice settings. Essential skills sets that emerged in the interviews included: good communication skills and the ability to network, ability to conceptualize something that didn't currently exist and develop a plan for bringing it to fruition, ability to think critically and problem solve, administrative or management skills and ability to overcome challenges in order to achieve a successful outcome. Some possessed these skills from the start, whereas others had to learn quickly through networking with other ECP dental hygienists.

(ECP) "[...] I had been in private practice for [...] years, and most of that was...well all of that was back in a clinical room working with patients. I had very little experience with the [...] administrative part of the dental office, so lots of trial and error, lots of learning, lots of tenacity and stubbornness; however you want to call that."

Data revealed a predisposing sense of confidence, determination and willingness to confront a challenge and creatively problem solve. These characteristics appeared to be critical for success since they were entering into a practice setting that to date had never existed in their state.

Working Relationship with the Sponsoring Dentist: In order to apply for an ECP, participants had to have a written signed agreement with a sponsoring dentist in the state of Kansas. All those interviewed mentioned having a good relationship with their sponsoring dentist. Trust and communication were mentioned throughout the interviews as an essential part of having that initial relationship for the agreement. One participant

mentioned that public health dentists were more apt to be sponsoring dentists and said "... we also have our best luck with the safety net dentists because they get it. They understand how important it is reaching out to the underserved population". One ECP participant stated the following about the relationship with sponsoring dentists:

"It is trust and respect. Different dentists and hygienists have different ways that they define trust and respect. There are a couple of dentists who are so committed to community based hygiene, and community based services that they will underwrite someone that they just happen to know."

Legislation Requirements: The ECP legislation, originally passed in 2003 and amended in 2007, allows ECP providers to treat additional underserved populations in more locations/facilities while concomitantly reducing the number of hours of clinical experience required for obtaining an ECP I from 1,800 hours to 1,200. Once the dental hygienist has received an ECP, they are bound to the limitations noted in the statutes. Participants revealed frustration with the many of the barriers that limited the population base that they could see as outlined in the legislation. Although they are allowed to treat those that are underserved and fit the parameters of the statutes, the ECP providers reported that they sometimes had to deny necessary care because of limits in the legislation. Payment to the ECP provider is also dictated by the legislation which specifies that they can only be reimbursed by their sponsoring dentist and/or from the administration of the facility where they are providing their services. Direct third party payment is prohibited as stated in the statutes. Most participants were receiving reimbursement for services through the dental clinic they primarily worked with or a dentist who was a Medicaid provider.

Partnerships

"...and so the networking skills, the ability to establish relationships, and to be very clear about a business plan, and to set up a business plan, is very important for people."

One thing all the ECP providers mentioned was the number of partnerships it took to get their programs initiated and make it successful. From this four sub-categories emerged: Start Up for an ECP, Partnerships, School Nurses and Building an ECP/Dentist relationship (local private practice).

Start Up for an ECP: Because this was a new

practice setting for these dental hygienist, participants reported that it was extremely helpful to have an online ECP Toolkit document as a resource. This Toolkit was created by the consultant working for Oral Health Kansas to assist the ECP dental hygienist with a starting point on how to develop a program. Previous to the development of the toolkit, many of the early and enterprising ECP providers reported that they had to independently develop forms (consent, assessment, treatment) that eventually became part of the toolkit. One interviewee noted: "...all those different little details that have to be customized community site by community site whether it's a long term care facility, or a school, or a Head Start program, or a WIC clinic, or health department...all those different places all have their own procedures, and so they're going to tweak yours (forms) in each of those." Some early participants reported that they started with old heavy donated dental equipment that was only portable because it had wheels on it but it was still cumbersome and difficult to transport. A new skill-set that many found critical to understand and develop was that of grant writing. Grant application information, included as part of the toolkit, allowed several to take advantage of their newfound skills and submit grants to entities that had a focus on supporting oral health initiatives. One study participant said: "...and so the networking skills, the ability to establish relationships, and to be very clear about a business plan, and to set up a business plan, is very important for people".

Partnerships: All participants had a group of people that were instrumental in collectively working together to get programs started. A few of the ECP dental hygienists work within safety net clinics and/or community health centers with the benefit of an incredible support system including both staff and administrative support. They work together as a team creating opportunities to engage more populations to provide preventive services. In some cases, they reported the need to develop relationships outside of the dental community in order to have access to the specific underserved populations. A few ECP dental hygienists contacted and built partnerships with directors of nursing homes, school Superintendents, school nurses and Head Start programs in order to initiate the opportunity to develop an oral health program within their facilities. All individuals involved were aware of the need and were willing to work together collectively to make a difference for those in need.

(ECP) "[...] it brought a new awareness to the surveyors, nursing home staff and care givers on

what does and does not happen in nursing homes regarding oral health for the residents [...]"

School Nurse: Participants who work in the schools mentioned that administrators have been instrumental in allowing them into their school programs, but it is the school nurse who assists with the program to make it a success. One of the ECP school-based providers in this study stated: "School nurses are the Golden Gate keeper which I'm sure you've heard. Generally they have a heart, they want to help the kids, they can be very persuasive and they're trusted already."

School nurses have direct contact with students and understand the issues with the lack of dental care. The importance of the school nurse supporting the idea was detailed by one interviewee who said: "that school nurse actually individually called each parent. There were thirty three kids seen on that day. Each parent was called and asked, 'Do you mind your child being seen...I am taking them out of class for this service. Do you want that?' and all 33 parents said yes."

However, not all school nurses are inclined to have a dental hygienist come into their programs. One dental hygienist noted the barrier of a school nurse: "... just getting the schools to allow us to come in...there were some blocks with the school nurses as they sometimes didn't want us. They felt that they were already taking enough time out of class with these kids, because the kids we see are the kids who really need to be in class."

Participants stated that they learned the importance of educating all involved on what is exactly entailed in the program and how the staff and children will be impacted. In many instances, participants reported that they and the school nurse worked through concern's with the goal to ensure that the kids received much needed oral health care. Some of the greatest frustration expressed is trying to find a dentist who can treat those children with urgent needs. Since the ECP is unable to provide restorative care, this was often reported as a challenge. In working with school nurses, participants learned that this has been a real dilemma as there may not be a dentist within a 50 mile radius and/or no dentist who, even if available, is willing to accept Medicaid patients.

Building ECP/DDS Relationship (Local Private Practice): All participants reported that they make an effort to let the local dentist(s) know what their program entails and who they are working with in terms of populations and facilities. While some dentists are supportive, even going as far

as to work with the ECP and provide some limited services to patients with urgent care needs often pro bono, others are not. Some ECP providers are focusing on newborns to age five and trying to prevent early childhood caries (ECC) and have told the local dentist: "...what we're trying to do here is create really good dental patients for you. They're already going to have that comfort level. [...] they're going to come in and be that much more cooperative for them (the dentist)."

Funding

"In Missouri, they (public health dental hygienists) have their own NPI's (National Provider Identifier) and when they bill Medicaid, they bill under their NPI. As (ECP) hygienists (in Kansas), we still bill under the doctor's NPI, or the facilities NPI, ... so that's something that needs to be changed ultimately, and then (ECP) hygienists can go in with a sponsoring dentist (who may not be a Medicaid provider) and they can bill it themselves. I mean, I see that as a good way, if they really want to utilize ECP hygienists they have to do something, in my opinion, to make that process a little bit easier."

Funding emerged as a unified category that includes start up costs, reimbursement/billing and salaries. All participants applied for and received initial grant money for start up, usually in conjunction with other agencies or groups. It wasn't easy to get that initial funding, as one dental hygienist noted: "...they kind of gave me the idea and [...] helped me write a grant that we didn't get and then I sought financial support through other places here in [...] and it just keeps building every year."

An ECP working for a non-profit talked about the initial funding through grant money for start up: "they (the non-profit) had already received \$65,000 from a (funder) to help us with start up. They also received a \$100,000 from a (funder) to be disbursed over 3 years once start up actually happened and they had to because everything was donated." She took on the administrative roll and got the program initiated.

Of the 9 ECP study participants, 7 are paid by the agency with whom they work on an hourly basis or salary, while 2 are paid through their sponsoring dentist (Medicaid providers) or other health care facility that can bill for Medicaid.

"For many of the hygienists starting out, the reimbursement had come from Medicaid. And it was particularly for children. And so we had to clarify

for them, who were potential Medicaid providers. Most of the ECP hygienists were not working for a dentist, or did not have a sponsoring dentist, who billed for Medicaid. So they ended up working for health departments. For example, Head Start in Kansas can be a Medicaid provider and submit for reimbursement. That is how several of the hygienists working for Head Start and Early Head Start are compensated. And so we had to help them broker that relationship with the health department or with the Head Start and then teach the health department how to bill for Medicaid and how to use the online system for billing Medicaid."

Currently, there are 15 states that contain statutory or regulatory language that permits direct reimbursement from Medicaid to hygienists for services rendered (ADHA, 2011). One participant noted she gets paid less than she would in private practice, but gets full benefits through a community health center since she is full time with them. Two continue to work in private practice and use their ECP providing services on 1 to 2 days a week. One responded: "I'm paid through them (county health department) hourly. It's a part time position that varies. It can be 10 hours a week or less." The other part-time ECP gets reimbursed for the Medicaid/HealthWave services rendered which are paid to her through her sponsoring dentist who has a Medicaid number. One participant who is working within school systems is billing through a dental school: "They (the patients they treat) can't have private insurance, so we don't have any of that. We do take Medicaid and HealthWave and file it through the dental school."

An ECP that works for a non-profit stated: "the alternate way you set that up (in a nursing home) is you have a flat fee...and the nursing home collects that from the family. There are a couple of nursing homes in our area that aren't so good at paying their bills. So on those particular facilities, we just bill the family the flat fee. Basically it's just a break even to what the cost is...we're a non-profit. We're not out to make money, we want to get the service there, pay our hygienist, pay for supplies, and that's it. On the schools, we bill Medicaid and if they do not have Medicaid then it's a \$25 flat fee. ...for sealants and cleanings, just \$25 and we'll do it all and just bill the family. They consent to that. That is on-site. We can't do exams on-site, or diagnose...that will be just \$25 and that's to do everything, and basically help defray all our expenses."

Barriers

"The skepticism, is it okay? Is it legal? I love

that question, "Well, is it legal?" and dentists don't think it could be legal,[...] a lot of dentists have really no clue what an ECP is and that's been a barrier."

The emergent category of Barriers resulted in 2 sub categories being identified: general barriers and barriers to start-up.

General Barriers: A few participants noted a general barrier being that of local dentists not supporting their programs when they came to town to work in the school programs or nursing homes. One mentioned: "[...] I guess my major barrier is the dentist not understanding...with the Extended Care Permit sometimes they find me a threat coming into town and I don't want to be."

One of the other major barriers to many of the ECP programs is getting these patients that have been provided preventive services to see a dentist for urgent care treatment. Although there have been a few dentists that have been very proactive in treating some of these patients (often pro bono), especially in the larger cities, others have not wanted to be involved in any kind of support. Getting the children restorative care was cited as a major barrier by several participants. ECP providers continue to make strides in collaborating with local dentists to overcome barriers to restorative treatment on a case by case bases and immediate care for those with urgent needs.

(ECP) "[...] and another major barrier through this program has been getting the restorative care completed. I mean that's like the kingpin of the whole thing. You can treat them with the preventive (services)...because we do the sealants, the radiographs, the prophys, the fluoride and all that. [...] the year before last we had 11% get their restorative done. This past year we had 15%."

Barriers to Start Up: The first ECP providers were the pioneers that encountered many barriers to start up. Initially, a few of those that wrote grants for their start up efforts reported they were denied funding. In many instances, initial funds were used for equipment and supplies to get their programs started. Developing consent forms, an initial barrier, was corrected by adding the appropriate questions: Is your child eligible for free and reduced lunch? Do you have a medical card? Do you have private insurance? These questions were important to ensure that children were eligible to meet the requirements of the statutes. Some participants reported having limited space within the facility to set up their equipment. One provider

said: "...we worked, literally, in a 5x5 closet with one outlet with all this equipment. I mean it, we didn't have really ideal accommodations and so that was a major barrier."

Another major barrier for 2 of the study participants has been getting access to start their program in some of the schools. While many schools have welcomed the ECP providers into their institutions, some schools were reluctant to share information about the children to the ECP which limited the children that could be treated.

Nursing homes are another entity that participants reported encountering some barriers as well. One interviewee noted: "[...] in 2008, the legislature granted funds for the adults with disabilities, and frail elders on home and community based service waivers to have dental services."

Unfortunately, because of the state budget, the funding was cut so now there are no dental services except for emergency care available for those noted. The legislation is still in place, but no funding. This study participant mentioned that other ECP providers started to work for nursing homes but it was not sustainable. It took quite some time to develop the service, market the service, writing contracts and agreements. There was a great amount of work with medical histories, nursing home staff cooperation and then there may only be 2 to 3 patients to see on the day they were there to provide services. Those programs dissolved due to the time it took to get the program up and running and not enough reimbursement to make it a long term venture.

Models of Care

"So, as well as it's another service that they (long term care facility) can say (to the family/individual), "You need to come here because we have dental that's being provided. Hygienists are coming and doing cleanings and they're screening, and if they see any concerns they will help facilitate in getting your elderly loved one to a (dentist)...so basically you've got to find out what's important to that particular facility and sell the points (about ECP) that are on it."

Within the Models of Care category there were 7 sub-categories that emerged in data analysis: Use of ECP, ECP practice setting, target populations, working within a school system, non-traditional dental hygiene services, services provided by a volunteer dentist and student dental hygiene providers.

Use of ECP: All of those interviewed have successful programs using their ECP. Most of these hygienists have other ECP hygienists that work with them providing clinical services. There are 3 study participants that are not doing as much clinical since their main focus is managing the program where additional ECPs are being utilized. However, they all have an administrative role of some type which is very typical of an ECP. The ECP dental hygienists interviewed for this study sometimes found themselves a solo entrepreneur, even when working with a health department, and having to manage both positions as administrator and clinical dental hygienist. One dental hygienist said: "I have the [...] program that I started and I do it in the schools. I'm the only employee. I have portable equipment, chair, stool and I use a head lamp."

When most of these ECP student participants started, there were no "positions" for ECP providers, per se, so they created their own programs and then marketed themselves to the local community health centers, Head Start programs, nursing homes and school systems.

ECP Practice Setting Characteristics: ECP practice settings can certainly be different than private practice. When you develop a program, you are often the manager, administrator, clinician and the staff. Those that become an ECP hygienist can learn from this study that in their position they may be moving portable equipment from facility to facility in order to offer their clinical services. Having the space to set up can sometimes be an issue within schools and nursing homes. Often times they have minimal spacing for their equipment as one ECP hygienist said: "...you know, a lot of times we would be in a multi-purpose room or something...or the nurses office if it was large enough. Some of the nurse's offices, I swear, were closets in a former life so there were times that I had my chair sitting in the doorway and then the patient chair was completely filling up the nurse's office..."

The study participants that work within a federally qualified health center (FQHC), safety net clinic or community health center tended to have a more stable environment much more similar to private practice. One interviewee specifically mentioned how much she enjoyed the autonomy of being an ECP provider at a community health center.

Target Populations: The Kansas statutes dictate the specific populations that the ECP dental hygienists can treat with preventive oral health ser-

vices. All but 1 treats children, whereas 4 of them also work with the residents in nursing homes and special needs individuals. One program has seen tremendous success: "In the first year we did...I think around 36 kids at 1 school (pilot program in March)...and then through the next school year we did 4 schools and we did 400 kids...and the next year we did 521 kids...6 schools." One provider, regarding working onsite with a special needs patient, said: "...we'd just seen them in the office, but it was impressive on how much better they did with less medication when we did it on site...I think they respond better in their own setting." One specifically liked the focus of working with the birth to 3 year olds and educating their parents to make an impact on reducing Early Childhood Caries (ECC). One noted: "...you know, the kids that need you the most are the kids that aren't coming into your dental office." Some of these dental hygienists also cover several counties to access their targeted populations and do so for both nursing homes and school programs.

Working Within a School System: The majority of school boards, superintendents and school nurses have been extremely proactive in inviting the ECP hygienists to set up their equipment in their facilities and treat eligible children with preventive services. One dental hygienist sees the kids from kindergarten through twelfth grade and offers screenings, prophylaxis, fluoride varnish and, if needed, sealants. She mentioned that having someone at the school willing to help her really makes the program that much more successful. Consent forms are necessary for treating the children and initially, just getting the consent forms back was a barrier. However, that was resolved when they had the forms signed at the fall registration. Each provider has a unique system that they developed with the nurses and teachers on how they retrieve the children for their appointments to try and keep them out of the classroom as little as possible. Depending on the arrangements with the time the kids take to getting to the chair and what services are given that day, the clinician may see anywhere from 5 to 16 children.

(Interviewer) "[...] how did you get the schools on board? What...how did you get through to get people on board and what did you do?"

(ECP)"[...]well, we had to talk to the principal and he accepted it right away...he and the school nurse know the need. They see the kids come in with their bombed out teeth and ...oh, nowhere to send them. And so they knew that I could be the guide for screening and trying to help them find (dental) homes, which I have not been successful

either in finding...I mean anywhere close. Everyone (dentist), everyone's an hour away..."

Non-Traditional Dental Hygiene Procedures: There are many additional aspects of the ECP provider position that go above and beyond a typical clinical dental hygienist's daily job description. Many of the ECP hygiene study participants do several administrative duties such as the development of initial consent and treatment forms, checking children's eligibility for Medicaid/Health-Wave, hauling heavy equipment/supplies and setting up in less than ideal spaces (poor ergonomic situations), and picking children up from their classrooms for scheduled appointments. There are a few providers that are in management positions within their programs and have additional duties such as writing grants, daily scheduling and administrative paperwork. Some actually spend nearly as much time on paperwork and administrative time as they do providing clinical care; some are paid for all their time, others donate some of their time as part of the commitment to the program.

(ECP) "[...]and you figure the hours that you're in doing a school, kids, you're figuring almost that many hours for the time I go home and fill out all the paperwork for the [...], all my paperwork for the state, because they give us grant money so we have state papers to do besides all the forms we have to send to the parent...beside those kids who really need to be seen right away by (a dentist)...that I have to call the parents and talk with them."

Services Provided by Volunteer Dentists: As stated earlier, getting children a referral for restorative care has been a challenging process for many of the ECP study participants. However, it seems that the best source for the children to receive operative care is having the ECP provider connected with a safety net or community health department. A few interviewees mentioned that they have anywhere from 10 to 15 dentists in the area that volunteer and it seems to work best if the dental clinic is flexible to the times the dentist is willing to provide services. There are other volunteer dentists that will actually see the children in their offices. One ECP provider said: "We have a list of about 7...well, we have a list of 10 (dentists) that each one has agreed to take 1 child a month. When there are 521 patients and the decay rate's like 86%, you end up running out of dentists really fast. [pediatric dentist] has done a ton of pro bono stuff...he has done a surgical case for us, and I mean he's done a ton of stuff. And so he's on board, and we're going to start next year busing

one day a month. I'm going to take a bus load of kids to his office...and he's going to treat them all right then and there..."

Student Dental Hygiene Providers: Two ECP providers interviewed mentioned that they are able to have dental hygiene students do a rotation through their programs. The students benefit from being able to work with more children than they might generally see in their school clinics as well as the direct public health atmosphere. The ECP hygienists are the dental hygiene students' evaluators while they are treating patients. This is a great opportunity to reach the underserved population with preventive services as well as give the students experience encouraging them to seek employment in underserved areas.

Sustainability

"(One) dental hygienist who was invited (to work in) an Alzheimer's unit, and a step down unit, and a rehab unit, and huge numbers of apartments, assisted living. So she travelled about forty-five minutes from her home. Picked up the equipment from a safety net clinic, ten minutes over...it took her about twenty minutes to set up the equipment. And sometimes, even though they had eight people scheduled, maybe three would show up. Now that was the job of the social worker and the nursing department. So she had to rely on these people delivering patients to her. And there were probably a number of good reasons why they didn't show up. So she had to clean up the equipment, take it back, and go home, and she did stop that service."

The emergent category of sustainability did not result in any sub-categories but rather stood as a unified category. Nursing homes and working with the elderly seem to be a real challenge to the ECP providers as far as being sustainable due to the nature of the environment, the bulkiness/weight of the portable equipment, and the frail nature of their patients making it more likely they might fail their appointment. The invested time of the ECP provider to offer services in a nursing home is short lived due to numerous obstacles that keep the program from being sustainable. The time it takes to set up equipment (which is often bulky and heavy) and provide care to only a few patients (in an 8 hour day) does not allow the ECP hygienist to gain much income to make this a long term program. Reimbursement plans vary for elder care, but it is common for the ECP provider to get reimbursed on a per patient basis, so when the chair is empty, they are not getting paid. It takes collaboration with the nursing home

staff, the residents and the ECP provider to make it a successful program. All those involved must value the oral health services and understand the importance of providing the care so that it can become a sustainable plan. One dental hygienist stated: "it's 50 pound equipment....I'm hauling it in and out. I just can't do it anymore, you know, I've got to (do all that) and all the paperwork."

Two big safety net clinics were mentioned with success stories by 1 of the study participants. "... In both cases, the agency, the health center employs full time a person who does all the marketing, all the setting up, all the coordination, all the agreements, and makes sure there is a sufficient number of people that the hygienist can serve before they bring them into the...everything from assisted living, to a school to a job care program."

Several ECP providers that started with grant monies are working to develop ways to have their programs made sustainable just from the services they provide whether it's in the safety net clinic, community health centers or through their individual programs with schools in several counties. An ECP working within a safety net clinic said: "... in the bigger cities that have the Safety Net systems, their private insurance patients are generally going to a different dentist. Where we're at (located), there's not a dentist to go to. So that is a very key part of being able to be self sustaining, hopefully without grant dollars...so that we won't need primary clinic money. We won't need to have to rely on that." A few interviewees mentioned that they are still unsure of how their programs will be maintained after the initial grant funding for supplies has been utilized. However, they have been able to defeat other complications and they are all looking to find ways to continue to their work using their ECP's and making a difference in these unserved and underserved populations.

Impact of the ECP

"There was a resident in one of the facilities we were in and ...every time this resident would come to the table, she would start to eat and she would become combative. [...] staff couldn't understand and they just kept upping her dose of antipsychotics, upping it and upping it. So then, once we brought the program (oral care education) in and they did the assessments, they found that she had all six of her lower anterior teeth were abscessed. They took her in (to the dentist), took the teeth out, put in a partial and were able to get her completely off antipsychotic drugs."

This study revealed that the ECP providers

were definitely making an impact. Within this final emergent category, Impact of the ECP, 3 sub categories were identified: positive change from ECP intervention, unintended consequences of an ECP, and access to oral health care.

Positive Change from ECP Intervention: The ECP dental hygienists that were interviewed had a definite impact with positive change from their intervention. One dental hygienist provided several occasions where she received positive feedback from children: "we had barely gotten into the room before he (a young boy she had treated before) said, 'Look, Look, Look' and he grabbed his lip and he pulled it down and said, 'Look, it's pink, it's pink. It doesn't bleed when I'm brushing.'" She also mentioned a young junior high school boy that was a huge Mountain Dew drinker and had several large areas of decay: "we got him hooked up with a (dental) clinic and he was able to get taken care of. But I didn't think I was really going to get anywhere... The next time I saw him...he said, 'I'm not drinking Mountain Dew anymore.'" Another respondent mentioned "I do more dental health talks in February, you know, because all the teachers ask 'Will you come talk to our class?' I feel that's fine and something I can do for the community." Another ECP mentioned that providing sealants has been successful since very few sealants have been placed according to the school screenings.

Training the nursing home staff to be able to identify oral care issues has had a tremendous positive effect on the residents. This ECP stated: "if a resident stops eating, I would ask the staff what they would look for when a resident stops eating and they would say they're going to look to see...they'll probably think about giving them more anti-depressant medicine. Or because they're you know, they might be depressed, or they might have a stomach ache, but never once did any of them say that they first place they looked was in the mouth. And so now, when a resident stops eating, the first place they look is in the mouth. So awareness is slow, but it's coming." Another statement from her cited the impact of the program: "...in the first year of the program...[nursing staff] kept track of hospital (visits). But in the second year of the program...they did not have one pneumonia case that they sent to the hospital. And the DON (Director of Nursing) thought it was definitely due to the oral care program, improved oral care." This dental hygienist also reported that elderly resident facilities that kept up with the elderly patients oral care got these patients referred when they had a problem and they also noticed less weight loss. An ECP working

with special needs patients on site mentioned: "... it was very impressive on how much better they did with less medication when we did it on site, so I thought that was a very interesting thing to see and perhaps maybe a way to go with dental procedures for some developmentally disabled that wouldn't need, you know if you could just do simple fillings or extractions, I think that they respond better in their own setting."

Unintended Consequences of an ECP: It was evident in speaking with this group that a few of them had actually carved out a 'niche' as a result of obtaining their ECP. One of the study participants wrote a grant for an agency to develop a screening/fluoride program for the 0 to 5 year old age group. Once the grant was approved, she applied and was offered the position of the project manager. Another ECP study participant got her start with the Head Start program and went on to develop her own program working with children in eight counties. One ECP provider turned her opportunity into a business through grant funding that allowed her to hire ECP's to provide an oral care training program for staff working in 13 nursing homes throughout the state of Kansas. These clinical dental hygienist have not only benefited the populations they serve with preventive services, but have also had opportunities to use their ECP to advance themselves as programs developers and project managers.

Access: The ECP provider is working with targeted populations that have limited or no access to dental offices or do not have a dental office in the city/town where they reside that take Medicaid or HealthWave insurance for children. One interviewee stated: "over the past few years, from 2007 to 2010, safety net clinics have been expanded in the state significantly. In 2006, there were 5 dentists working in safety net clinics, and I think there are 37 now (2010). We've gone from serving maybe 5,000 patient contacts to maybe 30,000 patient contacts. Most of the dental clinics, the safety net dental clinics dotted throughout the state, and we just opened a couple of new ones and are about to open another new one... they have been the ones hiring hygienists, and they've been the ones hiring the Extended Care Permit hygienists."

These clinics provide a 'hub' that the ECP can work from and allows them the mobility of providing care for these populations of children in their school or Head Start program, the elderly in long term care facilities and/or special needs/developmentally disabled in their care homes. ECP providers are making an impact by accessing children,

who may not otherwise receive dental care, within schools, providing preventive treatment such as prophylaxis, assessments, sealants and fluoride applications. One dental hygienist noted: "it's a whole community out there so hungry for dental. They have to drive to (...) or (...) or (...), we kind of meet in the middle out there... they need to find help in some way." They team with the school advocates to get children with urgent needs referred for further care, however, it is often not possible due to the lack of a Medicaid dental provider in the area.

Discussion

With the increased awareness of the need for oral health care to unserved and underserved populations on a national level, allowing dental hygienists direct access to those populations that have limited access to dental care is a viable solution to providing preventive dental care. The ECP providers very closely resemble the Limited Access Permit (LAP) dental hygienist in Oregon.¹³ The population base is very similar as well as the practice locations that are established in the legislation.

ECP dental hygienists that were participants in this study had a very entrepreneurial spirit. Their passion for working with these specific populations was a major driving force for them to consider applying for an extended care permit. Written agreements with a sponsoring dentist, development and implementation of their programs and perseverance through obstacles and challenges were well outside the norm of clinical practice, but they were determined to succeed. This kind of determination of the ECP provider parallels the findings in a qualitative study of the limited access permit (LAP) hygienist in Oregon.¹³ The LAP hygienists in Oregon also had to develop their own systems and strategize how to get their programs started and make them successful. Unable to receive direct reimbursement, per the statutes, the ECP dental hygienists all developed payment plans through a facility that already had a Medicaid number or through a dentist that was a Medicaid provider in order to process services for reimbursement. Although Medicaid covers children's oral health, one of the biggest barriers to accessing adults and the elderly is the fact that there is no dental care funding for a majority of this population. The lack of funding and the lack of value of the preventive services may be a significant barrier that will not allow the ECP provider to sustain a successful program for the elderly. It would seem that all those involved would benefit from an arrange-

ment of a specified number of patients having preventive dental care services provided and the ECP would receive a regular consistent salary allowing her to continue this program in facilities such as long term care.

These ECP hygienists have been able to develop their programs in just about any kind of location. They adapt to whatever situation they are given and are flexible to overcome whatever hurdles they encounter. Their experiences have increased their motivation to provide care to these targeted populations, even if the reimbursement was minimal. It is often the satisfaction of making a difference in someone's oral health and overall health while increasing access to care that keeps them sustaining their programs.

One limitation of this study is that it is a first of its kind to examine the ECP dental hygienists in Kansas and therefore is hypotheses generating versus hypotheses testing. A second limitation is the nature of this type of study being qualitative with interviews consisting of self-reported data. While a great deal of effort was put into verifying the data through the methodology, self-reported data contains several potential sources of bias such as selective memory, attribution and exaggeration.

Conclusion

The ECP providers are a group of entrepreneurial dental hygienists willing to work outside the traditional clinical practice setting. They had to learn to develop/strengthen skills to achieve funding, develop partnerships, and excel in their communication and networking skills in order to create

a successful oral health program. Although they encountered barriers along the way such as financial reimbursement and finding restorative care for those unmet needs, they increased access to preventive oral health services to those in unserved and underserved areas of Kansas.

Future research should begin to test the hypotheses generated in this study. One example would be to quantitatively examine increased access by comparing treatment procedures provided by the ECP providers with improved oral health of their patients who are identified as unserved or underserved prior to the introduction of the ECP provider. Another example may be to investigate all ECP dental hygienists on what would be necessary to practice with their ECP status full time and creating a sustainable position to increase the access to care for the unserved and underserved populations. With thirty-five states having some form of direct access, there is an absolute necessity for initial research of each of these individual state models to further understand the expanded scope of practice of dental hygienists and the effect they have on the underserved and underserved populations with regard to access to oral health care.

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