



UNC HIV Oral Health Demonstration Project

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Initial plan for retaining patients in care and the study

•The initial plan was that all patients would receive comprehensive care and would become patients of the clinic.

•Incentives to retention were:

- care of free charge
- gas cards and parking vouchers
- toothbrushes, floss, toothbrush holders
- Attentiveness- one on one

Changes to the initial plan

•Development of a retention protocol

•Creation of an e-newsletter sent to the participant listserve

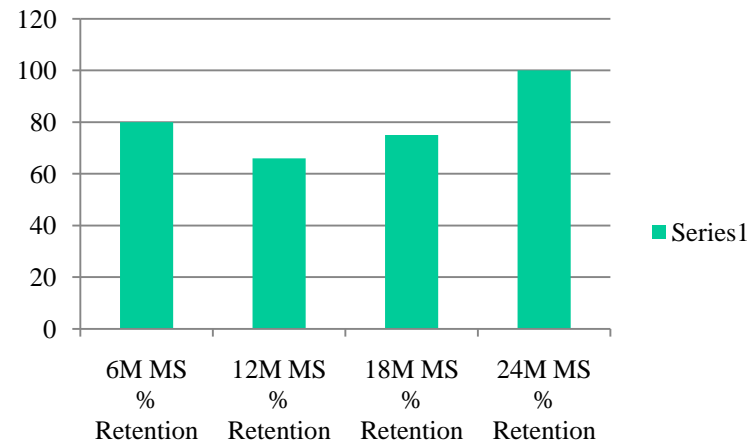
•Calling no shows

•Changed the number of participants in each group

Our Challenges

- Retention
- Under coding
- Broken appointments secondary to:
 - Transportation
 - patients not feeling well

Retention rates



Our Successes

•Communication of the navigator/dental case manager/hygienist with referring sites and with participants

•Incentives- gas card parking voucher

•Same provider care

•Education

Provider level- increased referrals of newly diagnosed individuals

Patient level education –as determined by:

1)improved Oral Hygiene, lower plaque index scores and lower gingival index scores

2)improved scores on both the oral health profile and the dental neglect scales

•Early intervention with regard to oral health care makes a significant difference. Upon analysis of the baseline data it appears that:

• Newly diagnosed individuals have more teeth and less dental disease significantly more teeth at baseline compared to both the previously diagnosed and historical groups $p < .0001$. On average the new group had 27 teeth per subject compared to previously diagnosed and historically diagnosed subjects with 23 and 21 teeth respectively.

•Newly diagnosed individuals had less attachment loss and less bleeding on probing (BOP) a sign of chronic inflammation (Kruskal-Wallis $p < .0001$)

•As expected, the control historical group had the least extent of coronal caries with a mean of 2 carious lesions and the previously diagnosed group had the most decay with a mean of 18 carious lesions ($n=162$, Kruskal-Wallis $p < .0001$). The new group had a mean of 11 carious lesions. This suggests there is less disease in the new group and that early intervention may inhibit progression.

The cost of treating the newly diagnosed individual is less

Greater levels of dental disease in the previously diagnosed group resulted in higher treatment costs with an average of \$1222 while mean treatment plans costs for the new group were \$997. Pairwise comparisons between the new and previous group using the Wilcoxin test determined that these differences were statistically significant $p=0.008$. Mean treatment plan costs for the historical group were significantly less at \$780 $p=0.001$.

Next Steps:

Program Replication

An infrastructure inclusive of infectious disease physicians, dentists, and allied health professionals to establish community linkages that will ensure oral health care for individuals newly diagnosed with HIV This comprehensive infrastructure is becoming well engrained in the culture of our local medical community. Have begun replication of the project in the following community health centers:

Lincoln –Early Intervention Clinic – A dentist and staff have been hired and will be trained at UNC to begin screening and providing comprehensive dental care for newly diagnosed HIV clients seen at the Lincoln Early Intervention Clinic.

Preceptorship/Tricounty-The dentist from Tricounty, Dr. Monica Pacheco, has completed a preceptorship and has been trained at UNC to begin screening and providing comprehensive dental care for newly diagnosed HIV clients.

Piedmont Community Health Clinics- Piedmont Community Health Clinics is comprised of 4 sites within central North Carolina. We are in discussions with the dental director, Dr. Bridget Wesley to discuss the logistics of program replication and implementation in these locations Continuing Education to Non Dental Health Care Providers. As part of the comprehensive HIV 101 course, we have provided continuing education for the UNC medical team who provide care throughout the Piedmont Region of North Carolina, stressing the importance of oral health care early in the course of HIV diagnosis and of oral manifestations of HIV.

Dissemination

•Upon completion, we have short term plans for presentation of our baseline data to local and national oral and HIV related meetings. We also plan publication of our baseline results in both the AIDS and oral literature. This should occur over the coming year. Longitudinal results will be presented next year,

•Continuing Education to Dental and Primary Health care Non Dental Health Care Providers We have provided continuing education for medical teams who provide care throughout the Piedmont Region of North Carolina, stressing the importance of oral health care early in the course of HIV diagnosis and of oral manifestations of HIV.

•SHARP- The State Healthcare Access Research Project (SHARP) from Harvard Health Law and Policy Clinic, Harvard Law School is researching and analyzing this and examining states' capacities to meet the care and treatment needs of people living with HIV and AIDS. Working together with community partners in SHARP states, the project is identifying past successes, current challenges, and future opportunities to improve access to care and services for people living with HIV/AIDS. North Carolina is a SHARP state. The UNC HIV Oral Demonstration Project has partnered to share insights about the challenges faced by people living with HIV and AIDS as they seek oral health care and the lessons learned, successes and challenges of the demonstration project thus far.

In order to investigate whether OGNAB reactivate herpesviruses, crude spent media from oral gram negative bacteria such as *Fusobacterium nucleatum*, *Porphyromonas gingivalis* were incubated with latently infected KSHV cell line, BCBL-1, and reactivation profiles were compared to the crude spent media of gram positive bacteria that do not secrete SCFA and do not have LPS such as *Staphylococcus aureus*, and media alone. In addition, in order to demonstrate that pathogens influence viral reactivation spent media from STD pathogens such as *Trichomonas vaginalis*, and *Neisseria gonorrhoeae* were incubated with latently infected herpesvirus cell lines and viral reactivation was examined. Taken together these data provide mechanistic data that explains epidemiological data that has shown that bacterial infections such as periodontal disease and STD infections have led to increase presence of herpesviruses.

As shown in figure 3b, the crude spent media has HDAC inhibition activity, which could inhibit ISRE transcription. It is possible that the spent medias along with the herpesvirus cellular homolog immediate early gene, viral IRF (vIRF), prevents Type 1 and Type 2 interferon responses. The data in this poster demonstrates that gram negative bacteria enhance viral reactivation by modulation of the PKC pathway and by inhibition of HDACs. Further these effects extended to host gene expression resulting in down modulation of the anti viral interferon response.