Prevention of Incipient Dental Caries
Implementation of Silver Diamine Fluoride in an Urban Indian Health Service Dental Clinic
Albuquerque Indian Health Service Dental Clinic (AIDC)
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Element 1: Purpose

Background
Silver Diamine Fluoride (SDF) is a safe, low-cost and effective treatment for caries prevention and management. AIDC is comprised of American Indian patients who live in surrounding tribal villages and often present with rampant decay. Many children referred to us due to non-compliance or uncooperative behavior. Furthermore, our clinic saw an increase in patients that did not see us because of lack of access to care due to COVID-19 closure of local Indian Health Service (IHS) dental clinics.

The purpose of this project is to educate our staff about SDF, in need of our patient population and instructions for use, in collaboration with the ultimate goal of preventing and/or decreasing incipient carious lesions.

Element 2: Goals

There are no current benchmarks for SDF placement within Indian Health Service. AIDC was averaging 42 SDF placements/tooth surface per month in 2019. The number is baseline.

Goal #1: Double the baseline number to 100 SDF placements per tooth surface per month for year 2020

Goal #2: Triple the baseline number to 300 SDF placements per tooth surface per month for year 2021

Element 3: Data Collection Plan

Description of Data
SDF Code (21350) will be followed monthly which is tracked via the Resource and Patient Management System (RPMS).

Monthly numbers will be calculated, reviewed, and the yearly average will be calculated at the end of the year.

- An antimicrobial treatment for the infection that causes tooth decay and for the reduction in tooth sensitivity.
- For years used for dental/hygiene services and carious lesions interproximally.
- 2014 TDA cleared for use in the US for dental hypersensitivity
- 2016 TDA granted clearance for use of dental caries

Element 4: Data Collection

SDF placements 2020

- Measurements were done quarterly
- All findings were discussed with the governing board and quality committee
- SDF numbers noticeable went down when the Covid-19 pandemic started in April of 2020

Element 5: Data Analysis

- Completed data for 2020 was calculated and it was determined that an average of 179 SDF placements per tooth surface per month for 2020 was completed. We surpassed our goal #1 and will continue QI to reach goal #2.

Element 6: Comparison to Goal

- Completed data for 2021 was calculated and it was determined that an average of 197 SDF placements per tooth surface per month for 2021 was completed.
- We surpassed our goal #2 (300 - 100% success)

Element 7: Corrective Actions

- We needed expert advice on how to proceed with standardizing the placement of SDF.
- We realized we needed to show patients and parents how SDF is placed in addition to show possible side effects, mostly discoloration of teeth and skin.
- Several parents called the clinic concerned about the discoloration on their children’s faces.
- The patient education videos were not working well. The videos were not watched when needed, patients were not following. It took away time from appointments.
- In order to keep placement of SDF standard for all providers at AIDC, we needed all supplies to be kept together in an SDF pack.
- Providers reported concerns that they could not see the SDF solution, which was clear and when placed in a white mixing well it was not visible.
- In order to increase SDF placement, we needed to train more providers and dental assistants how to administer SDF.
- SDF tattoos on cheek lips started to become a common issue. Counter tops were beginning to get damaged.

- Dr. Quam went to a pediatric dentist, consulted an expert in the area of SDF was consulted. All AIDC dentists were trained on how to apply SDF.
- Patient education videos were generated to show the ease of application and to show discoloration of teeth and skin.
- An SDF consent form was generated.
- Paper SDF brochures were created. Parents could take these home.
- SDF placement was a designated plastic container to hold all SDF supplies and instructions together, easy to use any time.
- Flossed SDF placed in a white mixing well for easier to visualize.
- An SDF in service was completed. We trained dental hygienists and dental assistants how to apply SDF with yearly competencies. A Dentrix template was created to ensure SDF documentation was in patient chart.
- Dental Inservice completed to show how to safely place SDF using chip or petroleum jelly around lip to aid in administration. In-service completed also to show how to protect clinic counter from SDF stains.

Element 8: Re-Measurement

- Completed data for 2021 revealed that an average of 238 SDF placements per tooth surface per month was completed.
- We surpassed our goal #2 (300 - 100% success)

Element 9. Additional Corrective Actions

- No additional corrective actions needed, however, we are going to continue to hold SDF in services for new providers and dental assistants that come on board, in addition to yearly SDF placement competencies for all providers, dental hygienists and dental assistants.

Element 10. Communication of Findings

- Reported to the Governing Body on April 24, 2022
- Reported to Full Staff on May 3, 2022

References

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