Overview

Oral health status and access to care continues to be a stark example of economic, educational and cultural health disparities, resulting in many individuals seeking emergency medical treatment to relieve their dental pain. In order to alleviate a portion of this problem, Dane County medical, dental and public health experts began a collaboration in 2014 to develop a standardized, best practice algorithm for the treatment and referral of patients who present with non-traumatic dental pain at our urgent care clinics (UCC) and hospital emergency departments (ED).

The implementation of this protocol began in February 2015 in conjunction with the Community Dental Care Coordinator (CDCC) project with Madison Dental Initiative (MDI). MDI provides the dental referral segment of the algorithm. Patients without a dentist are to receive the contact information for the CDCC at discharge and are offered affordable and timely dental care when they call. The goals of this protocol include:

- reduce the number of ED/UCC visits for non-traumatic dental pain
- reduce opioid prescribing for dental related visits
- provide patients with a direct path to definitive dental care to treat the source of their pain/infection
- reduce overall costs associated with dental pain/infections
Key Findings
The current data has been compared with several key findings in The Health of Dane County - Oral Health Crisis report from 2012, revealing some areas of improvement and issues that remain a concern, including the disparities among marginalized populations.

Number of visits has decreased
Dane County hospital emergency departments reported 2,093 non-traumatic dental pain visits in 2015; down from the 2,549 reported in 2010. The Urgent Cares saw a greater decrease from 3,211 in 2010 to 2,141 in 2015.

Total charges have increased
Over $2.5 million in charges were reported for 2015 ED non-traumatic dental visits compared to $1.6 million reported in 2010 by the same three hospitals.

Rate of repeat visits has decreased for one hospital ED
From 26.28% in 2014 to 23.52% in 2015 and continues to decrease through June of 2016, while the other two have shown a slight increase.

Disparities persist
The rate of utilization of ED for dental pain was 10 times higher for Blacks than for Whites in 2015, based on population estimates for Dane County.

Medicaid is the primary payor source for the majority of ED non-traumatic dental pain visits
All 3 hospitals’ MA cases outnumber the cases with other payor sources. Self-pay was also a good share.

The highest utilization of ED/UCC for non-traumatic dental pain is in areas of concentrated poverty and shortage of dental providers

Qualitative data shows
- Majority of ED/UCC department heads report that providers have had training on the Dental Treatment and Referral Algorithm but it is not embedded in their Epic system.
- Referral to the CDCC at discharge may not be standard protocol for all providers yet.
Future Directions
While oral health inequities are caused by complex systemic problems, there are models, pilot programs and policy changes that have shown success in reducing disparities. Working together in partnerships from the grass tops to the grass roots is essential to make significant changes. The Oral Health Coalition of Dane County is proposing a policy and systems agenda for 2017 with the following areas of focus for efforts and initiatives to address our community’s oral health needs:

1. Advocate for institutionalizing the non-traumatic dental pain protocol: Embed the algorithm into the health systems Epic workflow programs

2. Provide medical staff trainings on the standardized treatment protocol, best prescribing practices and referral process for patients with non-traumatic dental pain

3. Maintain and support safety-net dental care in Dane County - this includes continuing to expand and develop the CDCC project for the coordination of care for our most vulnerable populations

4. Collaborate with healthcare and other community partners to raise awareness of oral health issues and influence policy to maximize utilization of private dental insurance and utilization of Medicaid dental benefits

This report includes data from UW Health, UnityPoint Health-Meriter (UPM), SSM Health St. Mary’s and Dean Medical Group (SSM), and Group Health Cooperative-South Central Wisconsin (GHC), and provides preliminary findings of the utilization and extent of implementation of this standardized algorithm (found on last page of this report).

Limitations of the report include: 1) It is difficult to evaluate the effectiveness of this project with the algorithm having not been embedded into the hospital and urgent care clinics’ Epic systems; 2) opioid prescribing data was not reported, thus we are unable to make statements on opioid prescribing for dental related visits; 3) UCC data for one healthcare system was combined with their primary clinic data, thus we cannot compare or combine that data with other UCC data, thus it will be reported separately.

For additional information PHMDC published a 2016 report, Oral Health in Dane County – Moving Towards Equity, which can be downloaded at: https://www.publichealthmdc.com/documents/OralHealth201610.pdf
Graph 1. Total number of non-traumatic dental pain ED visits per year

- The number of ED visits due to dental pain has decreased since 2010 when there were 2,549 reported. In 2014 there were 2,405 and 2015 had 2,093 reported. However, the majority of these visits could be prevented with routine dental care.

- In 2015 the new Community Dental Care Coordinator at MDI received about 200 calls from individuals who were identified as referrals from the ED or UCC. The potential for reducing the number of ED/UCC dental visits increases with patients’ awareness and utilization of these services.

*NOTE - rates for 2011 – 2013 are not reported here as there is no comparable data

Graph 2. Percentage of repeat ED dental visits

- The percentage of repeat dental visits (within a 3 month period) is decreasing for UnityPoint Health-Meriter. SSM and UW have seen a slight increase in their rate of repeat dental visits.

*NOTE- for this 2016 data:
  - UW is through June 2016
  - UPM is through June 2016
  - SSM is through April 2016
Graph 3. Total Charges for ED dental visits (in USD)

- The charges for ED non-traumatic dental visits decreased from 2014 to 2015, but still remain high.
- In 2015, the 2,093 ED dental visits resulted in more than $2.5 million in total charges.
- Average 2015 charges per visit differed greatly between hospitals:
  - for 412 visits charges were $852,953
  - for 1,012 visits - charges were $980,276
  - for 669 visits charges were $706,536

Graph 4. Rates of ED utilization for non-traumatic dental pain by race

- Rates of ED utilization for non-traumatic dental pain were much higher for Blacks (289 per 10,000) than for Whites (31 per 10,000) in 2014; and similar in 2015.
*NOTE - limited data was available for ethnicity and hence it is not reported here*
Graph 5.  ED visits for oral health by payer type, 2015

- Medicaid was the primary payor source for the majority of ED non-traumatic dental pain visits for all 3 hospitals.
- Self-pay was also a good share
- “Other” includes commercial insurance

*NOTE - data for Graph 5 are for UW Hospital, SSM-St. Mary’s, and UnityPoint Health-Meriter Emergency Departments combined
Map 1. Combined ED visits for non-traumatic dental conditions by zip code – Dane County

Map 2. Percent population with Medicaid coverage – Dane County

- Combined data from SSM, UPM and UW-Health show that the majority of the patients presenting at ED for non-traumatic dental conditions were residents from Dane County’s high needs regions:
  - Dental Health Professional Shortage Area
  - Areas of highest percent population with Medicaid coverage
- These maps could indicate the need for:
  - More dental providers to reduce the shortage
  - More providers who accept MA insurance
  - Coordination of dental care to divert patients from ED
After Evaluation – If the dental pain is non-traumatic...

**Non-Traumatic Dental Pain for Adults > 18 Years Treatment & Referral**

- **Non-Urgent**
  - Pt seen DDS within 2 weeks
  - Give disability letter

- **Urgent**
  - Pt seen DDS within 1 week
  - Give disability letter
  - Patient is enrolled in emergency dental care program to schedule appointment
  - Uninsured, cannot afford dental treatment and do not have dentist
  - Referral to private or community-based service (may require transport to clinic)
  - Attempt to contact patient to confirm

- **Emergent**
  - Flu with OMS, Pt seen within 7 days
  - Diagnose & treat
  - If treatment still necessary:
    - Consider medical (oral) pain in addition to OMS treatment
    - Consult medical/behavioral specialist (OMS)

- **End**