

Integrating Evidence-Based Practice, Quality Improvement, and Systems Leadership to Enhance Patient Safety and Access to Oral Health Services for Vulnerable Populations

Kimberly Allen, DNP, RN Salisbury University

1101 Camden Avenue, DH 221-A, Salisbury, MD. 21801 410-677-0092, kdallen@salisbury.edu



Problem Identification

Constraints to oral care services for vulnerable populations in a rural area resulted in an inaugural oral health safety net event. Workflow barriers identified post-event included the need to improve patient flow and provide standardization of volunteer work processes.

Two-Fold Purpose

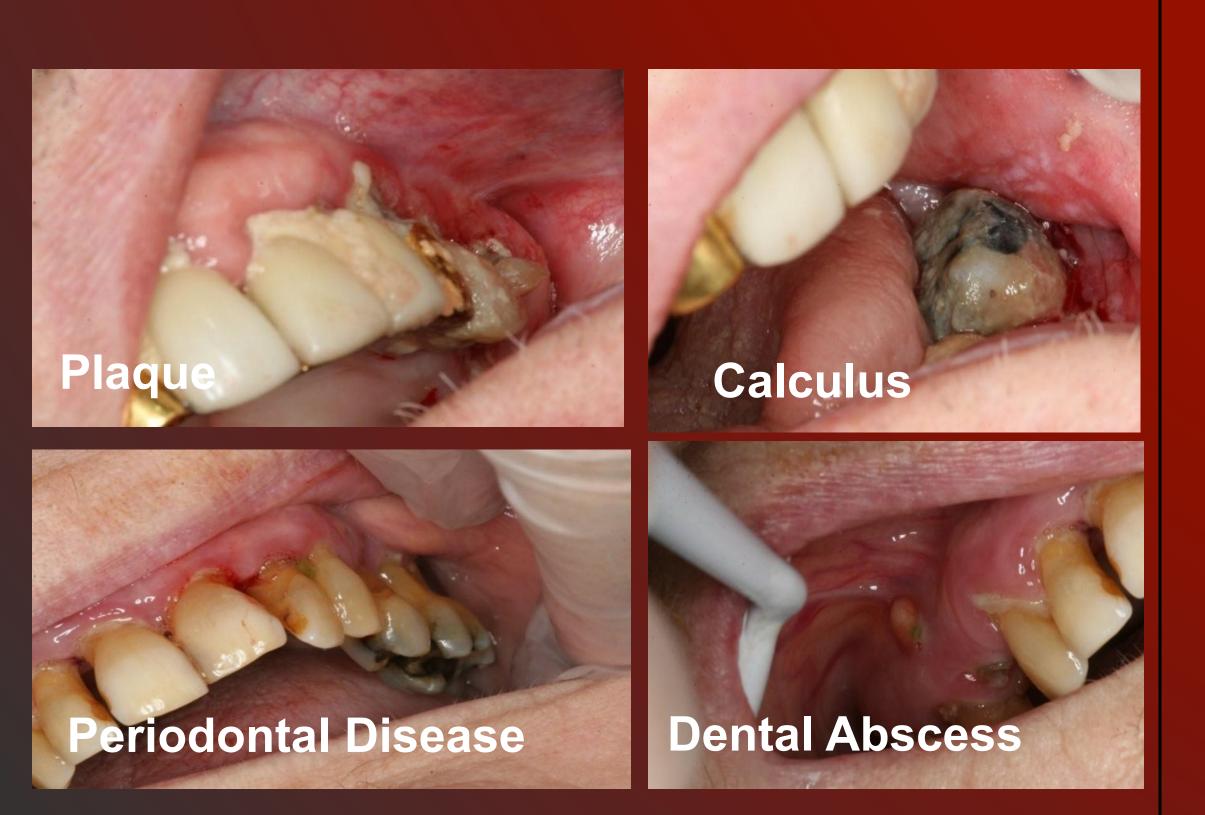
- Design and implement an evidence-based clinical management protocol to promote the standardization of medical screening work processes at Eastern Shore Mission of Mercy (ES MOM) safety net events
- Influence adherence to the developed evidence-based protocol by medical volunteers through implementation of an on-line medical screening volunteer orientation

Model for Evidence-Based Practice Change (Larrabee, 2009)

- Internal data collection (problems, interventions, & outcomes)
- Identify sources of evidence
- Synthesize best evidence & assess risks and benefits
- Define changes (resources, implementation design)
- Implement change (evaluate process & outcomes)
- Integrate change into standards of practice

Methods

- Assume Medical Lead role for ES MOM
- Identify significance of problem of oral health care disparities
 - Population statistics
 - Quality care impact
 - Financial, ethical, and legal implications Federal and State oral health initiatives
- Review of Literature
 - Medical screening and health assessment questions
- Diabetes
 - Hypertension
 - Infective endocarditis Congenital heart defects
 - Joint replacements
- Develop medical screening protocol
- Develop instructional on-line module for medical volunteers
- - Pre-Post survey of medical screening parameters
- Evaluation
- Develop Google document to capture protocol parameters
- Implement protocol at ES MOM event
- Evaluate outcomes
 - Medical volunteer knowledge
 - Medical volunteer compliance of protocol use
 - Patient time spent in medical triage Numbers of patients screened
- Disseminate Findings



Medical Screening Volunteer Demographics **Outcomes** 70% **■** > 60 (24%) **45-59 (27%) 30-44** (21%) **18-29 (27%)**

Enhanced Medical Screening Volunteer Knowledge ■ Pre-survey correct (N=33) ■ Post-survey correct (N=33) * P<0.01 **Protocol content-specific area**

Evidence-Based Medical Screening Intake Form

B ₁ PATIENT MEDICAL	HISTORY (High	nlight risk	factors identifi	ed)			B ₂ MEDICAL	PRE-SCREENING			Case ID:	Date	:	
		Time In:			Time (Out:	Data Collected by	(medical triage volunte	er name and number):					
HEALTH HISTORY (check all that apply)					ALLERGIES (check all that apply)		Are you presently under a physician's care? Yes No			0	Date of Last Medical Visit:			
Stroke / Embolus	Date:	Cano	Cancer		П	Local Anesthetic (adverse reaction)	Pulse:	Blood Pressure:	PSO2:	Medical Lea	d Utilized:	Jtilized: Yes No		
Heart Attack	Date:	Radi	iation Treatment	Chemotherapy		Latex	Reason:							
Heart Valve Replacement	t Date:	Tube	Tuberculosis			Sulfa (i.e. Bactrim)	Temp:	Blood Sugar:	INR:	Minutes spent in Medical Triage:				
Endocarditis	Date:		or AIDS	Lupus		Cephalosporin (Cephalexin)	1			□ 0-10 □ 11-15 □ 16-20 □ 21-25 □ > 25			> 25	
Heart Stent		Xero	Xerostomia / Salivary Gland Hypofunction			Clindamycin	Ct DRE-MED	C1 PRE-MEDICATION (To be provided in DENTAL TRIAGE area after review by credentialed practitioner)						
Cardiac Pacemaker De	efibrillator (AICD)	Ane	Anemia Liver Disease			Penicillin / Amoxicillin								
High Blood Pressure Lo	High Blood Pressure Low Blood Pressure Bleeding Disorder / Excessive Bleeding		ssive Bleeding		Spectinomycin / Erythromycin Heart	Amoxicillin 2g Clindamycin 600 mg Cephalexin 2g Time Given:								
Murmur Ri	urmur Rheumatic Fever Hepatitis (circle applicable): A B C				Fluroquinolones (i.e. Avelox, Cipro)	Other medical observations and/or patient comments that may impact treatment:								
Heart Disease		Asth	ıma	COPD	Ш	Metronidazole (Flagyl)								
Shunts (AV)		Pros	Prosthetic Body Parts			Doxycycline / Tetracycline								
SOB / Difficulty Breathing		Rhe	Rheumatoid Arthritis			Other (list):	Physician/Practitioner(printname): Sign and Number/Date:							
Diabetes (circle appropriate) ID NID		Hea	Hearing Loss Vision Loss		Prior S	Surgery? (Details):								
Malaria / Parasites		Toba	Tobacco Use Alcohol Use				000/	-4!4			4	al! a al a		
Have you suffered from abuse or neglect?		Curr	Currently Pregnant				83% patients spent < 10 minutes in medical screening							
Do you use any of the follow	wing medications	(circle all th	at apply):				(97%	< 15 min	utes)					
Aspirin, Excedrin, Plavix (clopidogrel bisulphate), Coumadin (warfarin), Pradaxa (dabigatran), Heparin (lovenox, arixtra, clexane), Xarelto							Decre	ased nui	mhers o	f natie	ents de	enied servi	res	
Brilinta, Effient, Aggrenox, Eliquis Fosamax, Actonel, Didronel, Pamidronate (aredia), Skelid, Xgeva (Prolia), ANY IV? Boniva, Zometa, Reclast						Decreased numbers of patients denied services (> 1000 patients received services over two days)								
Please list any medications you are currently taking (Medication Name(s), dose last taken) Last Blood Sugar (Date / Time):						Blood Sugar (Date / Time):	Decreased workflow barriers							
					Last IN	NR Result (Date):	Enha	and alia	nt cafat	, b.,	4ili-04:	on of thest	proctic	
When did you last eat?			Describe any activ	ve infections?					_			on of 'best al collabora	_	



Systems Leadership

- Inter-Professional Components

 - Dentists, Dental Assistants, Hygienists, MDs, RNs, Pharmacists,
 - Medical Volunteers, EMTs, IRB approval
 - Non-Clinical
 - On-line delivery format, Fundraising, Data Tracking, ES MOM Community Director, IT, Translator, ZsystemsGo, Non-Medical Volunteers
- Planning Organizing
- Collaboration / Negotiation
- Identification of Quality Indicators
- Change Implementation
- Accountability

Challenges & Recommendations

- Lack of published tools & protocols
 - Develop evidence-based protocols in other ES MOM areas Develop Google forms to capture protocol parameters
- Volunteer status
 - Expand incorporation of on-line orientation for all volunteer areas
 - Continued collaboration among diverse disciplines
- Lack of dedicated funding
 - **Grant opportunities**

Implications for Practice

Nurses must exercise leadership skills to translate evidencebased practice recommendations into useful tools that assist in directing practice and guiding interdisciplinary teams across health care systems.

References

- AAOS (American Academy of Orthopaedic Surgeons) & ADA (American Dental Association).(2012). Prevention of orthopaedic implant infection in patients undergoing dental procedures. Retrieved from http://www.aaos.org/research/guidelines/PUDP/PUDPguideline.pdf
- ADA (American Dental Association). (2013). Maryland MOMs. Retrieved from http://www.ada.org/news/8713.aspx Armstrong, M., Gronseth, G., Anderson, D., Biller, J., Cucchiara, B., Dafer, R…& Messe, S.(2014). Summary of evidence-based guideline: Periprocedural management of
- antithrombotic medications in patients with ischemic cerebrovascular disease. Neurology, 80(22), 2065-2069 Larrabee, J. H. (2009). Nurse to nurse: Evidence-based practice. New York, NY: McGraw-Hill
- Melnyk, B.M. & Fineout-Overholt, E. F. (2011). Evidence-based practice in nursing & healthcare. Philadelphia, PA: Lippincott, Williams, & Wilkins Norton, W., Funkhouser, E., Makhija, S., Gordan, V., Bader, J., Rindal, B...& Gilbert, G. (2014). Concordance between clinical practice and published evidence. JADA,
- Tinanoff, N. (2012). Potential to improve oral health care through evidence, protocols, and payment models. Journal of Public Health Dentistry, 72, S48-S51. U.S. Department of Health and Human Services. (2012). Healthy People 2020. Retrieved from
- http://www.healthypeople.gov/2020/topicsobjectives2020/ebr.aspx?topicID=32#recom
- Viola, T. (2014). Pharmacologic considerations in the treatment of the dental patient with cardiopulmonary disease. Access, 28(2), 20-21.