



Dental Category Newsletter

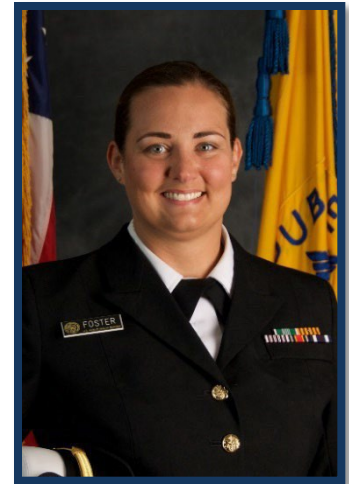
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2022 USPHS Scientific and Training Symposium - Dental Category Day By: CDR Amber J. Foster

The 55th annual USPHS Scientific and Training Symposium took place on May 24-27, 2022 at the Renaissance Phoenix Glendale Hotel in Glendale, AZ. It was the first in-person Symposium since 2019. The annual conference provided continuing education workshops and presentations for the officers of the USPHS and other health professionals in federal, state, local and tribal organizations.



CDR Foster

The USPHS Dental Category Day was held on Wednesday, May 25, 2022, with the theme “Preparing for the Future”. Over 45 dental professionals attended the event. This included over a dozen senior officials from the American Dental Association, National Dental Association, Hispanic Dental Association, American Association of Public Health Dentistry, Centers for Disease Control and Prevention, American Association of Dental Boards, CareQuest Institute for Oral Health, the Indian Health Service, and the American Association for Dental, Oral and Craniofacial Research. (Continued on [page 7](#))



Figure 1: Symposium attendees with VIP (front row, left to right) VADM Levine, RADM Hinton, CAPT Schobitz, and RADM Ricks

Chief Dental Officer Remarks

RADM Tim Ricks

Hello Fellow Dental Officers,

As I write what is to be my last column in the USPHS Dental Category Newsletter, a newsletter that I re-started back in 2001, I hope you will indulge me as I reminisce over the past four years while serving as your Chief Dental Officer.

Four years ago, I received a call from RADM Sylvia Trent-Adams, then-Deputy Surgeon General, to congratulate me on my selection of CDO. The phone call did not go smoothly, though, as I lost phone service three or four times during the conversation before finally understanding the news. I was elated, but not because I was just named CDO but because I thought of all of the positive things I could hopefully do. Four years later, I am very proud of what WE (and I will get to that a little later) were able to accomplish! I have never been big on formalities, and that is why I refused to have a “change of command” ceremony and why I have refused to have a retirement ceremony. Serving as your chief dental officer has been the greatest honor of my life, four years that I will cherish and always remember. These four years have gone by so fast, but I hope that I have had some positive impact on you in some way.



RADM Tim Ricks

All of us have been defined over the past two and a half years not by the presence of one of the worst pandemics ever, but by our resiliency and dedication to our work, whether that is in managing programs, conducting research, or providing vital care to underserved and vulnerable populations. Each of you is a healthcare hero for how you responded during the pandemic, with many of you deploying multiple times and everyone picking up the slack in your duty stations and doing things like contact tracing, vaccinations, testing, or simply assisting others during the toughest of times.

As your chief dental officer, I had the fortune of helping navigate some of the COVID-19 waters. Early on during the pandemic, I created a new national oral health coalition, the COVID-19 Public-Private Partner Dental Coordination Group, a group that has met 20 times over the last two years. Initially, the group of leaders from 50+ dental, public health and medical organizations met to coordinate and streamline messaging to the public and to oral health professionals, but now the group is being leveraged in other ways such as working towards oral health professionals' role in Ending the HIV Epidemic, promoting oral health objectives in Healthy People 2030, and amplifying the messaging in the new report, *Oral Health in America: Advances and Challenges*.

With regard to that report, in 2018 I inherited what was commissioned as the second-ever Surgeon General's Report on oral health. I led a steering committee consisting of dedicated leaders from multiple agencies as we helped develop the framework and worked closely with the editors of the report. Ultimately, the National Institute of Dental and Craniofacial Research published the report in December 2021, but this 790-page document represents the work of over 400 contributors, including some of you. For any of you who played a role in the development or support of the report, or even amplifying some of the messaging since the report was released, thank you!

Besides the pandemic and the aforementioned report, we have faced other challenges over the past four years: declining numbers in our category, many new policies from the Commissioned Corps, HPSP issues (mostly resolved now, hopefully), multiple deployments in support of our mission, and more. In addition, we have faced public health threats like the opioid epidemic, the alarming jump in teens' use of e-cigarettes, controversies surrounding dental amalgam and fluoridation, and infection control issues – of course especially during the pandemic. But through it all, all of you reading this newsletter have stuck around, and many of you have helped on one or more of these topics over the past few years.

I would be remiss if I failed to mention specific individuals for their unwavering support over the past four years. CAPT (Ret.) Tim Lozon, who serves as the director of the IHS Division of Oral Health, probably did not know what he was getting into when he agreed to support me as chief dental officer. I remember him telling me that I had almost used the entire division's annual travel budget in just my first quarter as CDO, but he has continued to support me throughout the last four years and that support has been critical. Another person that I really need to call out is CAPT Nathan Mork, who has served as almost my “permanent” aide-de-camp for the past four years, picking up some of my slack in the IHS, traveling to meetings with me, and advising me in many ways. I have also leaned heavily on three other senior dental officers over the past four years – CAPT

Renee Joskow, CAPT Michael Johnson, and CAPT Phillip Woods – for their support and sage advice has not just helped me but has helped the entire dental category.



RADM Ricks enjoying well-deserved vacation time with his family

There are many others I would like to thank for their support, but I fear that listing everyone who supported me would probably take another 10 pages of this newsletter, so suffice it to say that I am eternally grateful to: the eight former chief dental officers who advised me every time I asked; the many leaders of organized dentistry and public health who embraced me; the agency/operating division leaders who collaborated with me on many different projects; the various members and leaders of the USPHS Oral Health Coordinating Committee and Dental Professional Advisory Committee who were the “movers and shakers;” my fellow chief dental officers in the other federal dental services; and my fellow chief professional officers. But most of all, I want to thank each of YOU for your support over the past four years. I am proud to have served in a PHS uniform and working with all of you to protect, promote and advance the health and safety of our Nation.

Over the past four years as your chief dental officer, I have attended 259 events in my official capacity, delivered 199 Power Point presentations or speeches (including 85 to organizations, 31 at state meetings, and 52 to dental schools or residency programs), completed seven site visits to facilities, done four podcasts, and delivered five commencement addresses, including one in a packed coliseum of 15,000 people! But through it all, I always tried to represent your interests and the interests of the USPHS to the best of my ability.

I hope each and every one of you has a long and illustrious career in the USPHS. I hope you will provide my successor with the same level of support to which you have given me. Keep up the great work, and as I close out this column, I also want to especially thank my family (pictured above) for their support and sacrifices over the past four years. There were definitely times when my wife Julie wouldn't see me for two or three weeks straight because of travels!

In Officio Salutis for the last time,

Tim Ricks, DMD, MPH, FICD, FACD, FPFA
Rear Admiral, USPHS
Chief Dental Officer
Assistant Surgeon General (Dental)

USPHS DENTAL CATEGORY NEWSLETTER TEAM

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CDR James Dixon, *CPO Updates*
CDR Joseph Grant, *DePAC Updates*
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LCDR Donna Rachuba, *Cover Story*
LCDR Rachel Rachuba, *Jr/Sr Officer Spotlight*
LCDR Kindel Kaelke, *CDE/Upcoming Events*
LCDR Angela Aldrich, *Agency Updates*

The USPHS Dental Category Newsletter is published two to three times a year and distributed electronically through the USPHS Dental Bulletin Board and agency distribution lists. If you have suggestions or comments about the newsletter, or would like to submit an article, please contact the co-editors [CDR Titania Brownlee](#) or [CDR Grant Abernathy](#). This newsletter is for informational purposes only and does not reflect official views of the United States Public Health Service Commissioned Corps or USPHS leadership.

Dental Professional Advisory Committee (DePAC) News and Updates

Minority Initiatives Subcommittee (MIS) Update

CDR Joseph Grant, Chair

The DePAC MIS was fortunate to have Ms. Janice Morrow, the Executive Director of the Society of American Indian Dentists (SAID), join our 17 MAR 2022 MIS meeting and speak to our members about SAID's mission, challenges, and accomplishments. One of the many hurdles that minority dental professionals and communities encounter is the need to increase awareness and helping find solutions to the cultural barriers of oral health. We continue to foster relationships with minority dental students with a Zoom Recruitment Event planned with the Student National Dental Association (SNDA) on 17 MAY 2022. SNDA is committed to supporting its minority dental students as they pursue their studies. Furthermore, SNDA members are a vital source of future minority oral health leaders, and the DePAC MIS is constantly seeking venues to strengthen our relationship with SNDA. As we continue working towards positive oral health outcomes for both providers and patients, the DePAC MIS has organized a training session for 21 JUL 2022 with Dr. Sheela Raja, PhD, a licensed clinical psychologist, and Director of the College of Dentistry Resilience Center at the University of Illinois. Dr. Raja has years of training and experience that should be beneficial to USPHS Dental Officers concerning the topics of Oral Health Resiliency and Trauma Informed Care. The DePAC MIS will continue to work faithfully as a source of leadership for all USPHS dental officers, and we are most happy to share news of our goals.



CDR Grant

Dental Category Awards Workgroup Update

CDR Benjamin Warren, Co-Chair

LCDR G. "Lee" Wright, Chair

When the PHS gained responsibility for care of Federal prisoners in 1930, dentists were assigned to penitentiaries, prison camps, and reformatories, to work together with contract dentists. An informal arrangement to serve American Indians and Alaska Natives through the Bureau of Indian Affairs became more formal in 1932, when PHS detailed dental surgeon Frank Cady to reorganize and supervise a dental program. Under Cady's guidance, school children became the focus of care, because of the relative accessibility of school and the opportunity to use teachers for public education about oral hygiene. (Public Health Reports (1974-), Vol. 109, No. 5 (Sep. - Oct., 1994), pp. 710-712)



CDR Warren

LCDR Wright

Dr. Frank C. Cady and Dr. Vernon J. Forney (several years later) were two dentists who made significant contributions to the Public Health Service. While they were both Commissioned Officers (which was the norm at that time), today the majority of dentists who work in federal agencies are civil service and tribal hire.

To honor their legacies, the DePAC Awards Workgroup is excited to announce two new awards this year, named after them. The Cady and the Forney Awards were created to honor the contributions made by civil service and tribal hire dentists.

The DePAC Awards Workgroup has also adopted condensed deadlines, effective this year. The new deadline to submit nominations will be August 1, and the selected awardees will be notified by the middle of October.

We hope these two changes will increase recognition of deserving civil service and tribal hire dentists, as well as allow for commissioned officer awardees to include award recognition in this year's COER.

How do you get involved with DePAC or become a mentor or protégé?

Check out the [DePAC website](#).

Senior/Retiring Officer Spotlight

By CAPT Stella Wisner

CAPT Stella Wisner was commissioned into the US Public Health Service in February 2000. She was assigned to the Federal Bureau of Prisons in the Metropolitan Correctional Center New York, NY from 2000 to 2001 and the Metropolitan Detention Center Los Angeles, CA from 2001 to 2007. From 2007 to 2010, she was assigned to the US Coast Guard at the Blasser Clinic in San Pedro, CA. This clinic is named after the late RADM Edward F. Blasser, who in 1985 was appointed as the Chief Medical Officer of the USCG and an Assistant Surgeon General of the USPHS. From 2010 to 2011, CAPT Wisner completed residency training in Exodontia at the US Navy's Recruit Training Center in Great Lakes, IL. From 2011 to 2014, she was assigned to the USCG's Samuel J. Call Health Services Center at the Training Center Cape May, NJ. This clinic is named after a Marine Hospital Service surgeon who served in the Revenue Cutter Service and was one of three officers awarded the Congressional Gold Medal for participating in one of the most famous rescues ever affected in Alaska, the Overland Relief Expedition of 1897-1898. From 2014 to 2019, CAPT Wisner was assigned to the Indian Health Service in the Chief Andrew Isaac Health Center in Fairbanks, AK. In 2019, she returned to the USCG clinic in Cape May, NJ, and served there until her retirement in 2022.



CAPT Wisner pictured here with her husband, Mark, attending the Coast Guard Ball in Cape May, NJ



As an Auxiliarist, Mark would work alongside CAPT Wisner in the dental clinic as a volunteer

CAPT Wisner is proud of several accomplishments during her 22 year career, all related to increasing the visibility of the USPHS and the dental corps in the presence of the other uniformed services and in the community. In June 2009 she recruited and coordinated 15 PHS officers from 5 agencies to line up with law enforcement officers to welcome athletes entering the stadium at the Special Olympics Southern California Summer Games Opening Ceremony and to present medals at the awards ceremonies for many athletic events. In May 2010 she worked with the Armed Services Blood Program to officially recognize USPHS officers as eligible personnel to donate to the program. Prior to that, PHS officers could only identify themselves as civilians during registration. She also helped coordinate an ASBP blood drive at the PHS Symposium that year in San Diego, CA. In 2014 and annually from 2018 to 2022, she lectured and taught trauma skills to medical students for the Advanced Trauma Life Support Mega Courses at the Uniformed Services University of Health Sciences in Bethesda, MD, as one of two PHS instructors and the only dental officer. In 2015 she authored an article about the PHS and the work of the IHS in Native Alaskan villages that was published in the November issue of Academy of General Dentistry Impact, a monthly publication for its 40,000 members. In May 2020, she coordinated with the USCG boot camp training program in Cape May, NJ to establish an oral health and hygiene course to include

an introduction to the USPHS and the eight Uniformed Services. This weekly course is now delegated to junior PHS dental officers to teach all recruit companies. The course is the first time in the USCG boot camp's history that recruits are regularly and formally introduced to the USPHS in a classroom setting.

After retirement, CAPT Wisner hopes to continue public service by volunteering in Coast Guard dental clinics as a member of the Coast Guard Auxiliary and by pursuing temporary dentist assignments in remote villages in Alaska with the Indian Health Service. She also hopes to one day volunteer at the Dental Volunteers for Israel clinic in Jerusalem as well as volunteer in other clinics across the US and around the world.



**Committed to the Mission of the Commissioned Corps of the USPHS:
Protecting, promoting, and advancing the health and safety of the Nation**

Junior Officer Spotlight

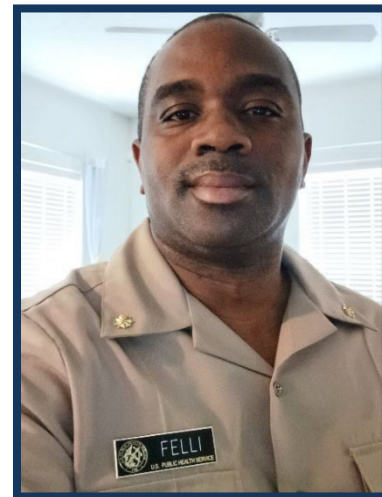
Q&A with 1st USPHS Reserve Dental Officer LCDR Ajikwaga Felli

Where and when did you graduate from dental school?

I graduated from the University of Pennsylvania School of Dental Medicine in 2008. I then went on to complete a general practice residency at Wyckoff Heights Medical Center in Brooklyn, New York. I was part of the National Health Service Corps, so my career has mostly been in a community public health setting.

Where do you practice dentistry?

I contract with the Geo Group and serve as the dental director at the Lawton Correctional and Rehabilitation Center in Lawton, Oklahoma. On some weekends I work with my wife who is a pediatric dentist and maintains a private practice in Allen, Texas.



LCDR Ajikwaga Felli

How did you learn of the USPHS Ready Reserve Corps?

I transitioned from private practice to correctional dentistry during the pandemic. One of our audits was conducted by a USPHS Commissioned Corps officer who mentioned that a ready reserve component was being established, and that it was worthwhile to check it out.

What are your responsibilities in the Ready Reserve?

As a Ready Reserve Corps officer, I participate in monthly Inactive Duty Training sessions. I keep myself prepared and ready to be called to active duty during national emergencies and public health crises or to backfill critical positions left vacant during deployment of Regular Corps officers. I also need to be available for service assignments in isolated, hardship, and medically underserved communities.

What are your hobbies and what do you like to do in your free time?

I enjoy outdoor sports and activities with my wife, two boys, family, and friends. I love to read and listen to audio books on my long drives and engage with my church family on Sundays. I have been involved with a Master of Public Health program for the past 18 months and look forward to graduating soon.

Are you looking to play a role in organized dentistry?

Do you have ideas or concerns that leaders in the profession should know about?

Do you have stories and experiences to share that can potentially help other new dentists?

Your voice is important, and here are some ways to impact your dental community.

Contact Tera Lavick, ADA New Dentist Committee Director, at 1-800-621-8099 ext. 2386 or newdentist@ada.org

ATTENTION USPHS DENTISTS!! You can become an ADEA member at **no cost**. Starting almost 20 years ago, the U.S. Public Health Service Dental Category became a corporate member of the American Dental Education Association (ADEA) because of the number of educational programs offered by our agencies/operating divisions, including dental residency programs. For those working in the USPHS or agencies served by the USPHS – BOP, CDC, CMS, FDA, HRSA, IHS, IHSC, NIH, USCG, etc. – you can activate your FREE membership and gain access to ADEA Connect, the dental education community network; a free subscription to the online version of the Journal of Dental Education; learning and professional development resources, award opportunities, and more. [To activate your ADEA membership, click here](#) and under “institution,” select U.S. Public Health Service in the drop-down menu and follow the prompts for the remaining parts of your profile.

USPHS Symposium (cont.)

The keynote speaker was Ms. Mary Otto the recipient of the 2022 Surgeon General David Satcher Keynote Lecture Award. Ms. Otto is an acclaimed medical journalist, and she shared her reporting journey that began with the death of Deamonte Driver, a 12-year-old boy who died from complications of tooth decay. She discussed what she has learned of the divide between dental and health care and her perceptions of how the disconnect continues to impact access to oral health services.

Other great lectures included Treating the Bisphosphonate and Anticoagulated Patient by CDR Justin Sikes, an Oral and Maxillofacial Surgeon from Shiprock, NM; Embracing a Culture of Safety in Dentistry by Dr. Steve Geiermann from the ADA, and RADM Tim Ricks discussed The Future of Oral Health in America.

The 2022 Dental Category Awards were also presented, recognizing the exceptional dental officers and civil service dentists that work in the various agencies served by the USPHS.

Award Recipients this year were:

- Ernest Eugene Buell Dental Award – named after the 1st USPHS dental officer, given to an outstanding junior dental officer
 - Recipient: **LCDR G. Lee Wright**
- Ruth Lashley Dental Award – given to an outstanding mid-career dental officer
 - Recipient: **CDR Cara Ortega**
- Senior Dental Clinical Award – given to an exceptional senior dental officer in a clinical career track
 - Recipient: **CAPT Craig Kluger**
- Dental Responder of the Year Award – given to a dental officer to recognize their contributions to emergency preparedness or response and deployment
 - Recipient: **CDR Scott Eckhart**
- John P. Rossetti Dental Mentor of the Year Award – given to a dental officer who has distinguished themselves as a mentor of others
 - Recipient: **CAPT Nixon Roberts**
- Herschel S. Horowitz Oral Health Research & Policy Award – given to a dentist who has distinguished themselves in either research or policy/administration
 - Recipient: **RADM (Ret.) Christopher Halliday**
- Jack D. Robertson Dental Award – given to an outstanding senior dental officer as a career achievement award
 - Recipient: **CAPT (Ret.) Kip Martin**

Congratulations to all 2022 award recipients!

Other events of the week included the annual Anchor & Caduceus Dinner on Monday evening, the Surgeon General's 5K Run/Walk on Tuesday morning, and a USPHS Ensemble concert Tuesday evening. There were many keynote speakers throughout the week including Dr. Leana Wen, RADM Richard Childs, VADM (Ret) Richard Carmona, ADM Rachel Levine, VADM Vivek Murthy, RADM Denise Hinton and CAPT Richard Schobitz.

The DePAC Mentoring and Retention Workgroup sponsored a Dental Career Counseling booth this year in the exhibit hall. Four senior dental officers assisted to staff the booth and provided career counseling to junior officers.

Clinical Perspectives: Tips and Tricks for Rubber Dam Isolation LCDR Jean Kang, DMD



LCDR Kang

The rubber dam was invented by Dr. Barnum in 1862¹ and is still being utilized today. In addition to its use as an infection control barrier during dental procedures, it has been shown to reduce the amount of microorganisms from aerosol-generating procedures by 70-98%, which may lower COVID-19 transmission in dental practice².

I am a firm believer in the benefits of rubber dam use in restorative dentistry due to its many advantages. When using a rubber dam, the user reduces the risk of ingestion or aspiration of dental instruments during treatment, provides a more aseptic and dry operating field, improves access and visibility, improves workflow, reduces overall treatment time, and reduces stress level on the dental team.

Over the years, I have learned many tips and tricks on how to better incorporate the rubber dam into my everyday practice. The main aim of this article is to share a few clinical tips and tricks on its uses and application with other dental officers and clinicians. If you are a dentist who works with a rubber dam for your routine restorative work and other dental procedures, then you may not find this article useful. However, if you do not like to use a rubber dam in your everyday practice, or find it time consuming or tedious, then you may find this article helpful.

1. INITIAL PREPARATION:

The following are the basic armamentarium for a rubber dam (Fig 1):



Figure 1. Rubber dam armamentarium.

* Preparing the Armamentarium:

The basic armamentarium includes a rubber dam punch, rubber dam forceps, a rubber dam frame, clamps, scissors, floss, a composite instrument, a rubber dam and a pen.

Optional equipment includes topical benzocaine, a rubber dam template, a floss ligature, a floss threader, an articulating paper, 2x2 gauzes, and a bite block.

* Selecting the Rubber Dam

When selecting a rubber dam, you will find many different thicknesses exist for various dental treatments and modalities. I prefer to use a medium thickness latex rubber dam sheet for restorative procedures. The following table may help you decipher what rubber dam to utilize^{3,4}.

Thin RD Greater Elasticity	Medium RD General All-Around Use	Heavy RD Maximum Tissue Retraction
Endodontic procedures	Endodontic procedures	Bleaching
Broad proximal contacts	Restorative procedures	Restorative procedures (Class V)

*** Customizing the Rubber Dam Template (punch holes/clamps)**

A laminated customized rubber dam template may provide an efficient, disinfected, and reusable method to determine what clamp and hole sizes to utilize. Furthermore, having a reference hole in a designated corner helps to orient the rubber dam when attaching the dam to the rubber dam frame (Fig 2).

However, this rubber dam template may have issues when used on patients with malocclusion or partial edentulism. One of the easier ways I have found is to hold the rubber dam, frame attached, against the teeth and mark the center of incisal edge or central fossa of posterior teeth (Fig 3.1 – 3.4).

There are more than 50 clamps on the market, but I found the following clamps to be most useful for restorative procedures:

#W8A and #W14 for maxillary molars, #W14 and #W3 for mandibular molars; #2 for premolars and canines; #9 and #212 for anterior teeth.

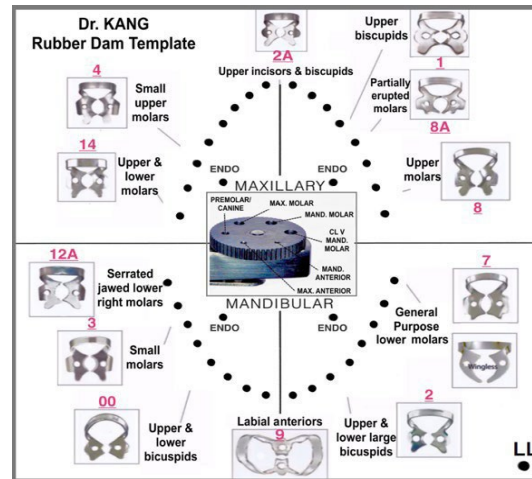


Figure 2. Customized rubber dam template with references for punch hole sizes, clamp types, and rubber dam frame attachment.

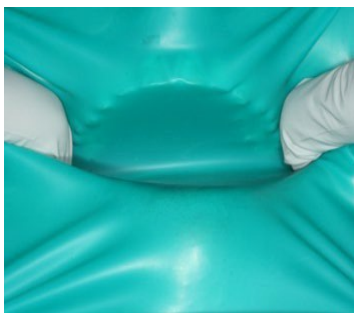


Fig 3.1

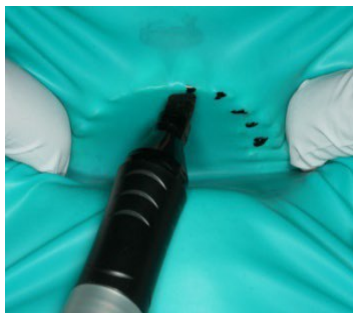


Fig 3.2



Fig 3.3



Fig 3.4

Figure 3. Alternate method to mark the punch holes on the rubber dam.

2. CLINICAL TIPS AND TRICKS: _

*** Placing the rubber dam**

As a precaution, the provider should ligate the selected clamp with floss in order to prevent the patient inhaling or ingesting the clamp. A floss threader can be used to facilitate the process, and the modified winged technique allows for visibility while placing the clamp over the tooth (Fig 4.1-4.3). One useful trick that I have found is to utilize topical benzocaine as a lubricant on the tooth-side of the dam, this serves as a lubricant and can potentially prevent discomfort (Fig 4.4). The rubber dam is then stretched over the bow of the clamp prior to its placement in the mouth (Fig 4.4-4.5). Once the rubber dam is in place, utilize floss to ensure the interseptal rubber dam passes through the contacts. The stability of the clamp is then tested digitally before the floss ligation is cut and removed (Fig 5.5-5.6).

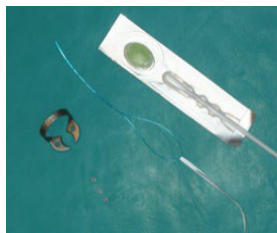


Fig 4.1



Fig 4.2

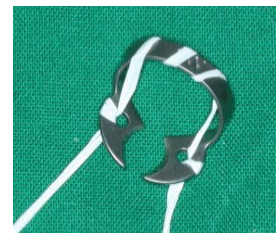


Fig 4.3



Fig 4.4

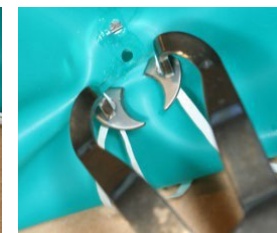


Fig 4.5

Figure 4. Utilization of a floss threader to facilitate ligation of floss to the clamp, and application of topical benzocaine as a lubricant.

I have found that marking the tooth to be clamped and the tooth/teeth to be treated with articulating paper is a good fail safe to help prevent wrong site surgery incidents (Fig 5.1). This also serves as a visual aid while placing the clamp over the tooth (Fig 5.2-5.3).

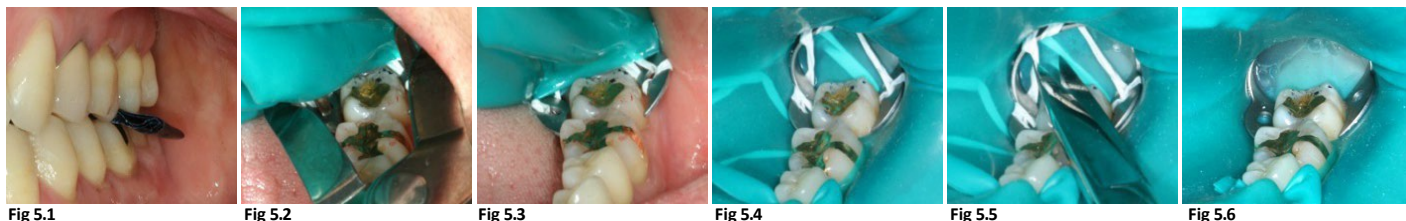


Fig 5.1 Fig 5.2 Fig 5.3 Fig 5.4 Fig 5.5 Fig 5.6

Figure 5. Steps for rubber dam placement.

*** Securing the Rubber Dam Anteriorly**

There are many different ways to secure a rubber dam, but one of the most common methods is through the use of the WEDJETS cord. For clinics without the WEDJETS cord, the corner of the rubber dam can be cut and used as a replacement (Fig 6.1). To save chair-side time and increase efficiency, a sheet of rubber dam can be cut in advance to make multiple rubber dam stabilizing strips (Fig 6.2). For dentition with generalized or wide spacing, an additional clamp can be placed on an anterior tooth over the rubber dam to secure the dam (Fig 6.3).

*** Ensuring Patient Comfort**

One useful tip to make a patient more comfortable is to fold the bottom corners of the rubber dam over the side projections in order to reduce and prevent the overflow of water onto the patient's neck and clothes (Fig 6.3). In Figure 6.4, a 2x2 gauze was placed between the rubber dam and the patient's skin to increase his/her comfort and prevent saliva from seeping onto the patient's face.

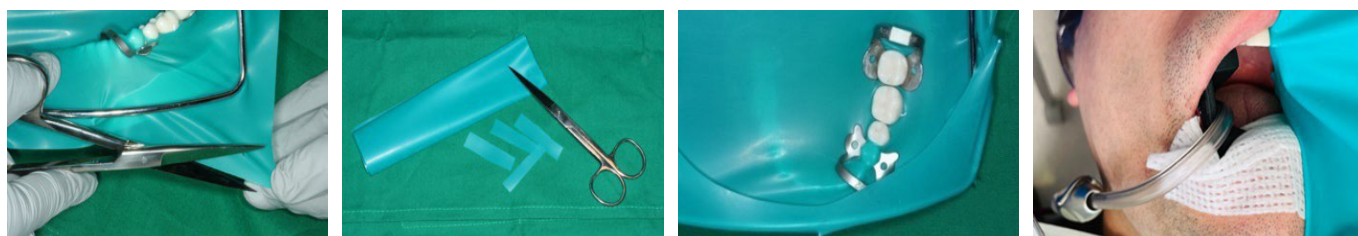


Fig 6.1 Fig 6.2 Fig 6.3 Fig 6.4

Figure 6. Various ways to stabilize the anterior region of the rubber dam.

*** Inverting the Rubber Dam**

A floss knot ligature is an efficient and convenient way to invert the edges of a rubber dam. By pulling the floss knot ligature around the tooth, the rubber dam sheet around the tooth is tucked into the gingival sulcus to aid in creating a moisture seal around the tooth, creating greater retraction of the soft tissue, and increasing visibility (Fig 8.1-8.4). Preparing the floss ligatures in advance will save more chair-side time (Fig 7.1-7.12).

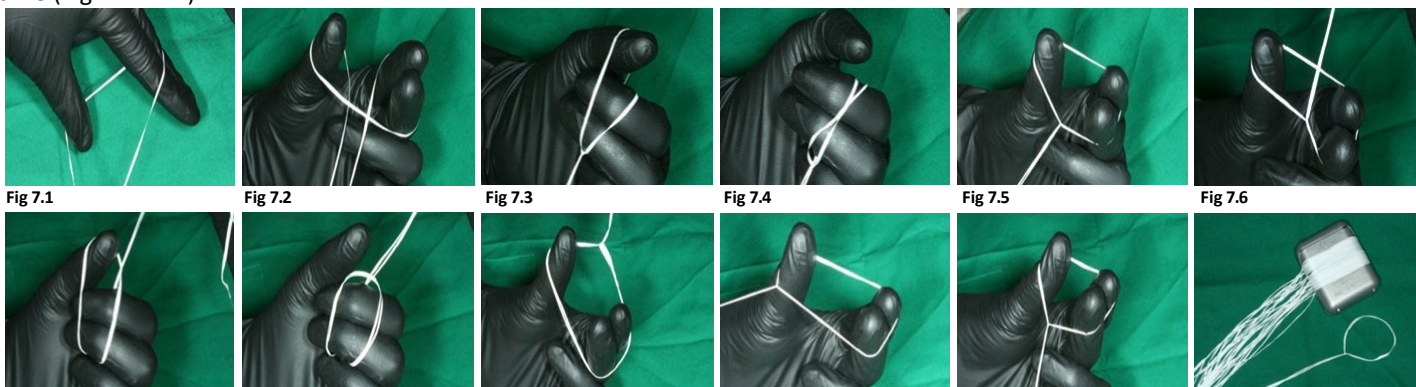


Fig 7.1 Fig 7.2 Fig 7.3 Fig 7.4 Fig 7.5 Fig 7.6 Fig 7.7 Fig 7.8 Fig 7.9 Fig 7.10 Fig 7.11 Fig 7.12

Figure 7. Steps for the floss knot ligature.



Fig 8.1

Fig 8.2

Fig 8.3

Fig 8.4

Figure 8. Inversion of the rubber dam using the floss knot ligature.

*** Checking for Leakage**

Water can be sprayed onto the operating field to check for leaks (Fig 9.1-9.4). An improper seal around the anchor tooth can easily cause leakage. This can be easily corrected by repositioning the rubber dam clamp.



Fig 9.1

Fig 9.2

Fig 9.3

Fig 9.4

Figure 9. Leakage check.

*** Sealing Around the Anchor Tooth**

Using a rubber dam without a proper seal would be like using a parachute with a hole, which is not the best idea. In order to create a tight seal around the clamped tooth, slightly open the clamp with rubber dam forceps and rock the clamp side to side while the prongs are in contact with the lingual and buccal aspects of the tooth (Fig10.1-10.5). Once a proper seal is accomplished, the restorative procedure can be carried out.



Fig 10.1

Fig 10.2

Fig 10.3

Fig 10.4

Fig 10.5

Figure 10. Steps for establishing the proper seal around the anchor tooth.

*** Two-handed Dentistry**

In an ideal world, dentists would always have assistants and the saliva and water would be suctioned away immediately. However, in the real world, when an assistant is unavailable, a saliva ejector can be modified to be a provider's third hand. By cutting the saliva ejector, often with scissors, you can expose the metal wire which can be shaped into a hook and placed



Fig 12.1

Fig 12.2

Fig 12.3

Fig 12.4

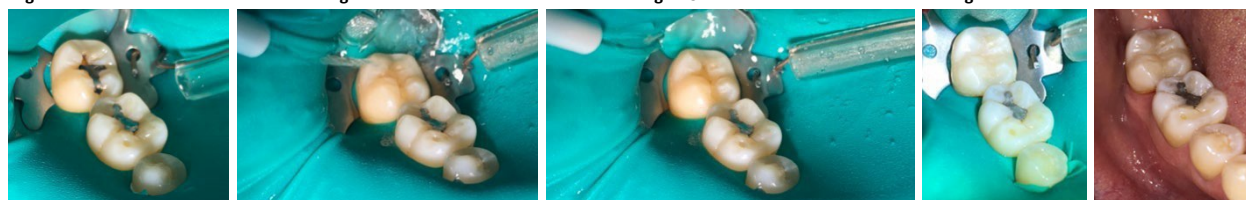


Fig 12.5

Fig 12.6

Fig 12.7

Fig 12.8

Fig 12.9

Figure 12. Steps for saliva ejector modification and its clinical application.

into the lingual side of the clamp. This technique is effective and will come in handy when four-handed dentistry is not possible (Fig 12.1-12.9). [Click here to watch this technique in action.](#)

3. CONCLUSION:

The oral cavity is a challenging environment to achieve a dry, contaminant-free operating field, which is crucial for restorative dentistry. Dental professionals face this challenge every day, and the use of a rubber dam can make restorative dentistry easier, quicker, and safer for the dentist and dental staff. I hope you found this article useful and that you get to use the tips and tricks discussed above in your practice. Lastly, I would like to share my clinical cases where the rubber dam was utilized for various restorative procedures.

Intraoral Photos of Clinical Cases:

Clinical Case 1

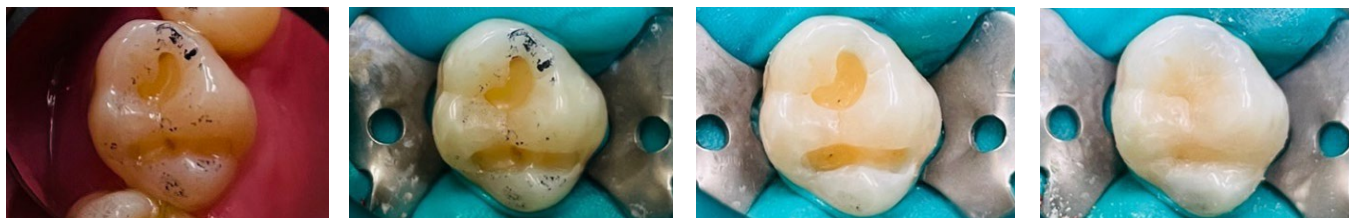


Fig 13.1

Fig 13.2

Fig 13.3

Fig 13.4

Figure 13. Class I caries. 1) an occlusal view of tooth #14 marked with an articulating paper. 2) single tooth isolation technique. 3) removal of defective restorations. 4) completion of tooth #14 OL composite restoration.

Clinical Case 2



Fig 14.1

Fig 14.2

Fig 14.3

Fig 14.4

Fig 14.5

Fig 14.6

Fig 14.7

Fig 14.8

Figure 14. Class II caries. 1) a bitewing radiograph of teeth #12, 13, and 14; #12 DO caries, #13 DO open distal box margin with recurrent caries, and #14 DO defective restoration. 2) a floss knot ligature on tooth #12. 3) a defective MO amalgam restoration on tooth #14 with a floss knot ligature. 4) recurrent caries under the defective #14 MO amalgam restoration. 5) complete caries excavation on teeth #12 DO, #13 DO, and #14 MO. 6) sectional matrix system application. 7) #12 DO, #13 DO, and #14 MO were restored with resin composite. 8) completion of occlusal adjustment and polishing on teeth #12 DO, #13 DO, and #14 MO.

Clinical Case 3

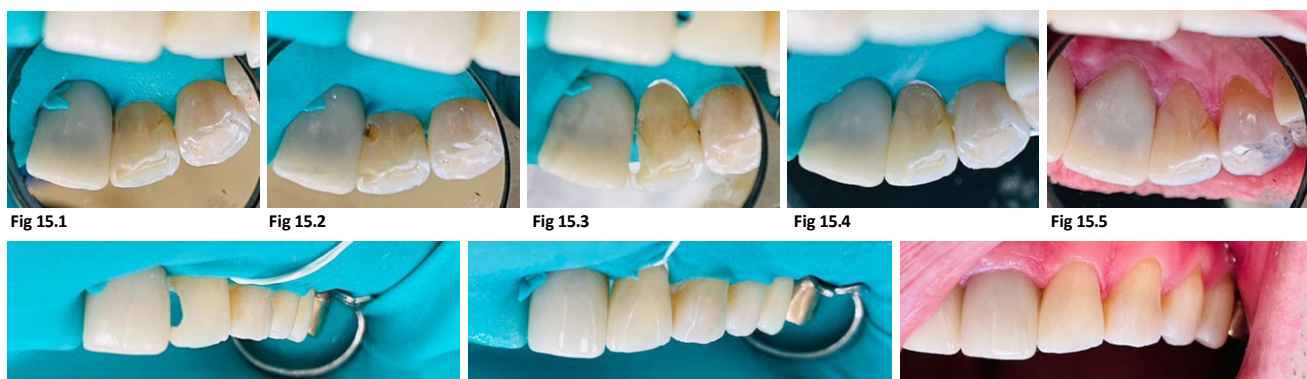


Fig 15.1

Fig 15.2

Fig 15.3

Fig 15.4

Fig 15.5

Fig 15.6

Fig 15.7

Fig 15.8

Figure 15. Class III caries. 1) a lingual view of tooth #10 MLF resin restoration with recurrent caries. 2) recurrent caries. 3) complete excavation of caries with a floss knot ligature around the tooth. 4) #10 MLF restored with resin composite. 5) checking occlusion and margin after removal of the rubber dam. 6) a buccal view of #10 MLIF prep. 7) finishing and polishing completed. 8) completion of #10 MLF restoration.

Clinical Case 4



Fig 16.1



Fig 16.2



Fig 16.3



Fig 16.4

Figure 16. Class IV caries. 1) a split rubber dam technique being used for #9 MLIF discolored resin replacement; a permanent maxillary retainer on teeth #7-10. 2) tooth #9 MLIF ready to be restored. 3) an occlusal view of the split dam technique. 4) completion of #9 MLIF restoration.

Clinical Case 5



Fig 17.1



Fig 17.2

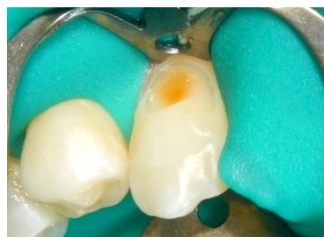


Fig 17.3



Fig 17.4

Figure 17. Class V caries. 1) the #9 anterior clamp placed on tooth #6 to retract gingival tissue. 2) etchant on the prep. 3) tooth #6 ready to be restored. 4) completion of tooth #6 cervical restoration.

References:

1. Winkler, R. (1991). [Sanford Christie Barnum--inventor of the rubber dam]. *Die Quintessenz*, 42(3), 483-6.
2. Cochran, M. A., Miller, C. H., & Sheldrake, M. A. (1989). The efficacy of the rubber dam as a barrier to the spread of microorganisms during dental treatment. *The Journal of the American Dental Association*, 119(1), 141-144.
3. Boushell, L.W., Walter, R., & Wilder A.D. (2019). Preliminary Considerations for Operative Dentistry. In A. V. Ritter, L. W. Boushell, & R. Walter (Eds.), *Sturdevant's Art and Science of Operative Dentistry* (7th ed., pp e23-e51). Elsevier.
4. Coltene. (2016). Handbook of basic dental dam procedures: *Dam-It, It's Easy*. Cuyahoga Falls, OH: Costello, M.R.

CONGRATULATIONS TO PY 2022 PROMOTIONS

To CAPTAIN/O-6:



- Sarah Shoffstall-Cone (IHS)
- Mandie Smith (IHS)
- Brian Talley (IHS)

To COMMANDER/O-5:



- Grant Abernathey (USCG)
- Folasayo Adunola (HRSA)
- Joseph Grant (USCG)
- Diem-Quynh Tan-Nguyen (USCG)
- Tara Van Orden (IHS)

To LIEUTENANT COMMANDER/O-4:



- Angela Aldrich (BOP)
- Patrick Trad (IHS)

Online Oral Health Resources & Continuing Education Opportunities

Collaborating and consulting with fellow dental officers is an excellent path to compare technique and see how new techniques are being applied. We all have our favorite social media sites to see cutting edge cases and find out about new materials. While these outlets are good to pay attention to and participate in, what we cannot get from these interactions are state approved continuing education that counts towards maintaining licensure.

As USPHS officers, moving, deployments, and service in remote locations can add additional hurdles to obtaining CE that the average dentist does not have to consider. Whether it is in person or online, there are multiple options available to fulfill your licensure requirements and gain knowledge on that new technique you may have seen recently.

National Events

Here is a helpful list of upcoming CE opportunities. As COVID rules and regulations are still in flux, please also refer to the course website for any in-person or virtual learning updates. Be sure to check your local dental association for the state level meetings as well.

2022

- July 1-5: [Flying Dentists National Meeting](#), Rapid City, SD
- July 14-17: [National Dental Association Annual Convention](#), Phoenix, AZ
- July 27-30: [Academy of General Dentistry Annual Session](#), Orlando, FL
- Oct 13-15: [SmileCon ADA Annual Session](#), Houston, TX
- Nov 6-9: [National Network for Oral Health Access](#), Nashville, TN

2023

- Feb 13-16: [Association of Military Surgeons of the United States](#), National Harbor, MD
- Feb 23-25: [Chicago Dental Society Midwinter Meeting](#), Chicago, IL
- March 11-14: [American Dental Education Association Annual Session](#), Portland, OR
- March 15-18: [American Association for Dental, Oral, and Craniofacial Research](#), Portland, OR
- March 16-18: [Hinman Dental Meeting](#), Atlanta, GA
- April 15-19: [American Association of Public Health Dentistry National Oral Health Conference](#), Orlando, FL
- May 25-28: [American Association of Pediatric Dentists](#), Orlando, FL

Web Based CE

Are you working in a remote location? Did you find out last minute you need 2 more CE hours before your license expires in three days? These CE outlets are open 24/7.

- [American Academy of Dental Sleep Medicine](#)
- [American Academy of Pediatric Dentistry](#)
- [American Association for Dental, Oral, and Craniofacial Research](#)
- [American Association of Public Health Dentistry](#)
- [American College of Dentists](#)
- [American Dental Association](#)
- [American Dental Education Association](#)
- [American Institute of Dental Public Health Colloquium](#)
- [Academy of General Dentistry](#)
- [Association of Military Surgeons of the United States](#)
- [Centers for Disease Control and Prevention Oral Health Division](#)
- [Indian Health Service](#)
- [National Dental Association](#)
- [National Maternal and Child Oral Health Resource Center](#)
- [National Network for Oral Health Access](#)
- [Proctor & Gamble](#)
- [Colgate](#)

[HuFriedy](#)

Non Traditional CE Opportunities

Tired of hotel conference rooms and stale chicken lunches? Check out these out of the box opportunities.

[Flying Dentists](#)

[Professional Education Society](#)

[Smiles at Sea](#)

[Ski & Learn](#)

[United States Dental Diving Association](#)

Do you have any suggestions for future issues of the Dental Category Newsletter?

Please contact the co-editors [CDR Titania Brownlee](#) or [CDR Grant Abernathey](#)