

# Tegaderm™ Transparent Film Dressing Family



Simple.  
Dependable.  
Trusted.



## Overview:

3M™ Tegaderm™ Transparent Film Dressings are supported by an extensive amount of clinical data in both wound and IV applications. In this brochure, you will find a selection of well designed clinical studies and other publications that include film dressings. If you have any questions or need a copy of the complete, published article or abstract, contact your 3M Health Care Sales Representative or the 3M Health Care Customer Helpline at 1-800-228-3957.

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# 3M™ Tegaderm™ Transparent Film Dressings

Tegaderm™ Transparent Film Dressings are the standard for IV site care. They are preferred by clinicians for protecting and securing catheters. Product safety and performance is supported by clinical studies in a wide variety of clinical settings. 3M offers a broad portfolio of sizes, shapes, and delivery systems, providing the clinician and patient with a solution for every transparent dressing need.

## Unmatched ease of application

- Frame style delivery system makes it quick and easy to achieve precise, secure placement of the dressing every time.
- Allows for one-handed placement in most applications.

## Enhanced site protection

- Tegaderm™ dressings are breathable, letting oxygen in and moisture vapor out, allowing the skin to function normally.
- The sterile film barrier is impervious to liquids, bacteria, and viruses,\* providing an effective barrier to external contaminants.

## A new look at IV site protection

3M™ Tegaderm™ CHG Chlorhexidine Gluconate IV Securement Dressing integrates the powerful effectiveness of CHG with the simplicity of a Tegaderm™ dressing to support your best practices and protocol.

- Clear, allowing continuous visualization of the insertion site.
- As easy-to-use and easy-to-train as a Tegaderm™ dressing.
- Absorbs fluid.

## Comfortable for patients

- Conformable film flexes with patient movement.
- Less frequent dressing changes reduce the risk of skin trauma.
- The adhesive is gentle to the skin, yet has good adherence for extended wear.
- Dressings with soft cloth borders and deep notches are designed for bulky, multi-lumen catheters and to reduce tension on the dressing and sutures.
- Notched dressings for peripherally inserted catheters provide a cushion under the catheter hub.



## Affordable

- IV site can easily be monitored for early signs of complications without disturbing or changing the dressing.
- Transparent dressings can be left in place for up to 7 days\*\* for CVC sites compared to 24–48 hours for tape and gauze dressings.
- Less frequent dressing changes save time, supply costs and reduce the potential for site contamination.
- Special adhesive of 3M™ Tegaderm™ HP (Holding Power) Transparent Film Dressing Frame Style provides greater *holding power* under diaphoretic or moist conditions.
- Consistent performance.

## Clinically proven

- Tegaderm™ dressings are supported by more clinical studies than any other brand of transparent dressings.
- Internationally recognized guidelines are supported by clinical studies using Tegaderm™ transparent dressings.\*\*

## Follow best practice clinical standards

- The CDC/HICPAC Guidelines for the Prevention of Intravascular Catheter-Related Infections base PIV and CVC (including dialysis) catheter dressing change recommendations on studies using Tegaderm™ Transparent Dressings.
- The INS Standards of Nursing Practice recommend a sterile dressing be applied and maintained, to provide protection of the IV site.

\* *In vitro* testing shows that the transparent film of Tegaderm™, Tegaderm™ HP and Tegaderm™ CHG dressings provides a viral barrier from viruses 27 nm in diameter or larger while the dressing remains intact without leakage.

\*\* 2002 CDC/HICPAC Guideline for the Prevention of Intravascular Catheter-Related Infections

# 3M™ Tegaderm™ CHG Dressings Clinical Studies & Publications

Infusion-Related Clinical Studies & Publications	Author	Literature Code	Page	Infection Prevention & Microbiology
Clinical Performance of a New Transparent Chlorhexidine Gluconate Central Venous Catheter Dressing	Olson et al 2008	70-2009-9669-5	10	
A Novel Integrated Chlorhexidine-Impregnated Transparent Dressing for Prevention of Vascular Catheter-Related Bloodstream Infection: A Prospective Comparative Study In Healthy Volunteers	Maki et al 2008	70-2009-9686-9	10	<b>X</b>
Prospective, Randomized, Controlled Trial Assessing the Clinical Performance of a Transparent Chlorhexidine Gel Pad Intravascular Catheter Dressing	Rupp et al 2008	70-2009-9687-7	10	
A Controlled Randomized Prospective Comparative Pilot Study to Evaluate the Ease of Use of a Transparent Chlorhexidine Gluconate Gel Dressing Versus A Chlorhexidine Gluconate Disk in Healthy Volunteers	Eyberg et al 2008	70-2010-7090-4	12	
Antimicrobial Activity of a CHG-Impregnated Gel Pad for IV Site Protection	Schwab et al 2008	70-2009-9694-3	10	<b>X</b>
A Multicenter Prospective Open Label Evaluation of the Clinical Performance of a Chlorhexidine Gluconate Antimicrobial Transparent Dressing	Decschneau et al 2008	70-2009-9692-7	12	
Results of a Clinical Evaluation Completed by an In-patient Infusion Team on a New Chlorhexidine Gluconate-Impregnated Dressing	Anderson et al 2008	70-2009-9693-5	12	
Migration of Chlorhexidine Gluconate Under Antimicrobial Gel Pad of IV Securement Dressing to Provide Continuous Antimicrobial Protection	Schwab et al 2008	70-2010-7089-6	10	<b>X</b>
Suppression of Regrowth of Normal Skin Flora Under Chlorhexidine Gluconate (CHG) Dressings Applied to CHG-Prepped Skin	Bashir et al 2008	70-2010-7144-9	10	<b>X</b>
The Absorptive Abilities of a CHG Gel Dressing: Can Initial Gauze Dressings be Avoided?	Olson 2009	70-2010-7261-1	12	
Growth Inhibition of Microorganisms Involved in Catheter-Related Infections by an Antimicrobial Transparent IV Dressing Containing Chlorhexidine Gluconate (CHG)	Hensler 2009	70-2010-7286-8	12	<b>X</b>
Evaluation of a New CHG Gel Pad Dressing for Catheter Care	Zehrer 2009	70-2010-7280-1	12	
Economic Evaluation of Antimicrobial IV Dressings	Brenner 2009	70-2010-7295-9	12	
The Use of Chlorhexidine Gluconate (CHG) on Central Line Insertion Sites: Disc vs. Gel Pad Dressing	Meninger et al 2009	70-2010-7329-6	10	<b>X</b>
The Study of Bloodstream Infection Rates: Factors You Should Know	Walters et al 2009	70-2010-7331-2	12	<b>X</b>
Individual Facility Experiences				

BIOPATCH® is a trademark of Ethicon, Inc.

Comparisons with BIOPATCH®	Comparisons with Non-antimicrobial Transparent Adhesive Dressings	Adaptability to Clinical Practices	Safety	Cost-Effectiveness	Use in Specialty Patient Populations
	X	X	X		
X	X				
	X	X	X		
X		X			
X					
X		X			
X		X			
X	X				
		X	X	X	
X		X			X
X	X			X	
X		X			X
Visit the 3M Tegaderm™ CHG Website at <a href="http://www.3M.com/tegadermchg">www.3M.com/tegadermchg</a>					

# 3M™ Tegaderm™ Transparent Film Dressings Clinical Studies & Publications

Infusion-Related Clinical Studies & Publications	Author	Literature Code	Page	3M™ Tegaderm™ Film Dressing vs. IV3000
A Prospective, Randomized Three-Way Clinical Comparison of a Novel, Highly Permeable, Polyurethane Dressing with 442 Swan-Ganz Catheters	Maki et al	70-2009-1797-2	14	<b>X</b>
Colonization and Infection Associated with Transparent Dressings for Central Venous, Arterial and Hickman Catheters - A Comparative Trial	Maki & Will	70-2009-1797-2	14	
A Highly Semipermeable Polyurethane Dressing Does Not Increase the Risk of CVC-Related BSI: A Prospective Multicenter, Investigator-Blinded Trial	Maki et al	70-2009-1797-2	14	
A Comparison of Two Transparent Film-Type Dressings in Central Venous Therapy (OpSite vs. IV3000)	Wille et al	70-2008-9099-7	14	
Do Dressings with Increased Permeability Reduce the Incidence of Central Venous Catheter Related Sepsis?	Reynolds	70-2009-0691-8	14	<b>X</b>
Infections Caused by Intravascular Devices Used for Infusion Therapy: Pathogenesis Prevention, and Management (Chapter)	Maki	70-2008-9638-2	16	
A Randomized Trial Comparing Arglaes (a transparent dressing containing silver ions) to Tegaderm™ (a transparent polyurethane dressing) for Dressing Peripheral Arterial Catheters and Central Vascular Catheters	Madeo et al	70-2009-6329-9	16	
A Prospective, Randomized Trial Comparing a Transparent Dressing and a Dry Gauze on the Exit Site of Long-term Central Venous Catheters of Hemodialysis Patients	Le Corre et al	70-2009-6327-3	16	
Comparison of Two Different Time Interval Protocols for Central Venous Catheter Dressing in Bone Marrow Transplant Patients: Results of a Randomized Multicenter Study	Rasero et al	70-2009-6328-1	16	
Evaluation of Dressing Regimens for Prevention of Infection with Peripheral Intravenous Catheters	Maki & Ringer	70-2008-3152-0	16	
Comparison of Transparent Dressing to Paper Tape Dressing Over Central Venous Catheter Sites	Lawson et al	70-2008-1522-6	18	
A Comparison of Transparent Adherent and Dry Sterile Gauze Dressings for Long-term Central Catheters in Patients Undergoing Bone Marrow Transplant	Shivnan et al	70-2008-5166-8	18	

Legend by Column: **X** Best Reference **X** Supporting Reference(s)

3M™ Tegaderm™ Film Dressing vs. High MVTR Dressing	3M™ Tegaderm™ Film Dressing vs. Antimicrobial Dressing	Safety of Transparent Dressings vs. Tape & Gauze Dressing	Infection Prevention Measures	Dressing Wear Times	Cost-Effectiveness of 3M™ Tegaderm™ Film Dressing vs. Tape/Gauze	IV Catheter Securement
<b>X</b>		<b>X</b>				
		<b>X</b>				
<b>X</b>		<b>X</b>				
<b>X</b>						
<b>X</b>						
		<b>X</b>	<b>X</b>			
	<b>X</b>					
		<b>X</b>		<b>X</b>	<b>X</b>	
				<b>X</b>	<b>X</b>	
		<b>X</b>		<b>X</b>		
		<b>X</b>		<b>X</b>	<b>X</b>	
		<b>X</b>		<b>X</b>	<b>X</b>	

# 3M™ Tegaderm™ Transparent Film Dressings Clinical Studies & Publications

Infusion-Related Clinical Studies & Publications	Author	Literature Code	Page	3M™ Tegaderm™ Film Dressing vs. IV3000
Transparent Polyurethane Dressings Do Not Increase the Risk of CVC-related BSI: A Meta-Analysis of Prospective Randomized Trials	Maki & Mermel	70-2009-0702-3	18	
Comparison of Transparent Dressings to Tape and Gauze for Intravenous Catheters in Home Environment	Berry et al	70-2008-1674-5	18	
Central Line Dressing Material and Neonatal Skin Integrity	Kellam et al	70-2008-3746-9	18	
Prevention of Central Venous Catheter-Related Infections by Using Maximal Sterile Barrier Precautions During Insertion	Raad et al	70-2008-8138-4	18	
Restriction of Bacterial Growth Under Commercial Dressing (Healthy Volunteers)	Aly et al	70-2008-3564-6	20	
Investigation of Bacterial Growth and Moisture Handling Properties of Transparent Dressings	Aly et al	70-2009-1859-0	20	<b>X</b>
Transparent Adhesive Dressings Do Not Promote Abnormal Skin Flora	Rhame et al	70-2008-3406-0	20	
Tegaderm™ Dressings Prevent Recolonization of Chlorhexidine-Treated Skin	Holmstrom & Svensson	70-2008-5461-3	20	
Yes, Virginia, Aseptic Technique is Very Important: Maximal Barrier Precautions During Insertion Reduce the Risk of Central Venous Catheter-Related Bacteremia	Maki	70-2008-8137-6	22	
Prevention of Intravascular Catheter-Related Infections	Mermel	70-2008-8775-3	22	<b>X</b>
Infectious Complications of Swan-Ganz Pulmonary Artery Catheters	Mermel & Maki	70-2008-8136-8	22	
Peripheral IV Catheter and Dressing System for Improved Catheter Stabilization	Caillouet et al	70-2010-7111-8	22	

Legend by Column: **X** Best Reference **X** Supporting Reference(s)



3M™ Tegaderm™ Film Dressing vs. High MVTR Dressing	3M™ Tegaderm™ Film Dressing vs. Antimicrobial Dressing	Safety of Transparent Dressings vs. Tape & Gauze Dressing	Infection Prevention Measures	Dressing Wear Times	Cost-Effectiveness of Tegaderm™ Film Dressing vs. Tape/Gauze	IV Catheter Securement
		X				
		X		X	X	
		X				
			X			
		X				
X		X				
		X				
		X				
		X	X			
X		X	X			
X		X	X			
				X		X

# 3M™ Tegaderm™ Transparent Film Dressings Clinical Studies & Publications

Wound-Related Clinical Studies & Publications	Author	Literature Code	Page	Surgical Incisions
Tegaderm™ versus Gauze Dressing in Breast Surgery	Moshakis et al	70-2008-0801-5	22	<b>X</b>
Pressure Ulcer Management in Home Health Care: Efficacy and Cost Effectiveness of Moisture Vapor Permeable Dressing	Sebern	70-2008-2359-2	22	
Comparison of Moisture Vapor Permeable (MVP) Dressings to Conventional Dressings for Management of Radiation Skin Reactions	Shell et al	70-2008-1431-0	24	
Scalp as Skin Graft Donor Site: Rapid Reuse with Synthetic Adhesive Moisture Vapor Permeable Dressings	Barnett et al	70-2008-4036-6	24	
Evaluation of a Sacral Shaped Transparent Dressing Over Contoured and High Stress Areas	Gokoo et al	70-2009-0693-4	24	
Management of a Peristomal Ulcer using a Calcium Alginate Dressing with a Sacral Shaped Transparent Dressing	O'Brien et al	70-2009-1575-2	24	
Use of Semiocclusive, Transparent Film Dressings for Surgical Wound Protection: Experience in 3637 Cases	Rubio	70-2009-0809-6	24	<b>X</b>
Options in Practice: Management of a Complex High-Output Fistula	Hanlon	70-2009-1704-8	24	
Evaluation of Transparent Dressing for Postoperative Wounds	Vazquez	70-2008-0808-0	24	<b>X</b>
Comparison of Synthetic Adhesive Moisture Vapor Permeable and Fine Mesh Gauze Dressings for Split-Thickness Skin Graft Donor Sites	Barnett et al	70-2008-3316-1	26	
A Study to Compare Two Film Dressings Used as Secondary Dressings	Thomas et al	70-2009-0730-4	26	<b>X</b>
Autolysis: A Clinical Approach to Selective Wound Debridement	Bryant & Rolstad	70-2009-1739-4	26	
Transparent Polyurethane Dressing Reduces Keloid Symptoms	Talsma	70-2009-1860-8	26	

Legend by Column: **X** Supporting Reference(s)

Skin Graft Donor Site	Pressure Ulcers	Chronic Wounds	Radiation Wounds	Keloid	Autolysis	Moist Wound Healing
	<b>x</b>					
			<b>x</b>			
<b>x</b>						
		<b>x</b>				
		<b>x</b>				
		<b>x</b>				
<b>x</b>						
	<b>x</b>	<b>x</b>				
					<b>x</b>	<b>x</b>
				<b>x</b>		

# 3M™ Tegaderm™ CHG Dressings Clinical Studies & Publications

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
Tegaderm™ CHG Dressings Tegaderm™ Transparent Film Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Skin Flora Reduction and Suppression</b>	<ul style="list-style-type: none"> <li>• Healthy subjects</li> </ul>	A Novel Integrated Chlorhexidine-Impregnated Transparent Dressing for Prevention of Vascular Catheter-Related Bloodstream Infection: A Prospective Comparative Study In Healthy Volunteers. 70-2009-9686-9
Tegaderm™ CHG Dressings OpSite IV3000® – <b>Adaptability of a novel new CHG dressing into clinical practice</b>	<ul style="list-style-type: none"> <li>• Adult patients</li> <li>• CVCs</li> </ul>	Prospective, Randomized, Controlled Trial Assessing the Clinical Performance of a Transparent Chlorhexidine Gel Pad Intravascular Catheter Dressing. 70-2009-9687-7
Tegaderm™ CHG Dressings Tegaderm™ Transparent Film Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Skin Flora Suppression on skin prepped with Chloraprep®</b>	<ul style="list-style-type: none"> <li>• Healthy subjects</li> </ul>	Suppression of Regrowth of Normal Skin Flora under Chlorhexidine Gluconate (CHG) Dressings Applied to CHG-Prepped Skin. 70-2010-7144-9
Tegaderm™ CHG Dressings Tegaderm™ Transparent Film Dressings – <b>Adaptability of a novel new CHG dressing into clinical practice</b>	<ul style="list-style-type: none"> <li>• Adult patients</li> <li>• CVCs</li> </ul>	Clinical Performance of a New Transparent Chlorhexidine Gluconate Central Venous Catheter Dressing. 70-2009-9669-5
Tegaderm™ CHG Dressings – <b>Migration of CHG from the gel pad under the catheter on human skin</b>	<ul style="list-style-type: none"> <li>• Healthy subjects</li> </ul>	Migration of Chlorhexidine Gluconate Under Antimicrobial Gel Pad of IV Securement Dressing to Provide Continuous Antimicrobial Protection. 70-2010-7089-6
Tegaderm™ CHG Dressings BIOPATCH® – <b>Zone of inhibition and antimicrobial activity of 2 CHG dressings</b>	<ul style="list-style-type: none"> <li>• <i>In-vitro</i> studies on agar plates</li> </ul>	Antimicrobial Activity of a CHG-Impregnated Gel Pad for IV Site Protection. 70-2009-9694-3
Tegaderm™ CHG Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Adaptability of Tegaderm™ CHG dressings into clinical practice</b>	<ul style="list-style-type: none"> <li>• Pediatric patients</li> <li>• Pediatric medical-surgical</li> <li>• Pediatric bone marrow transplant</li> </ul>	The Use of Chlorhexidine Gluconate (CHG) on Central Line Insertion Sites: Disc vs. Gel Pad Dressing. 70-2010-7329-6

\* Tegaderm™ CHG Dressing has not been studied in a randomized, controlled trial as to its effectiveness in preventing CRBSI.

Key Message	Author	Publication
<ul style="list-style-type: none"> <li>- Study 1: <b>On skin prepped with alcohol, Tegaderm™ CHG dressing showed a significantly lower re-growth at day 7 compared to BIOPATCH®.</b></li> <li>- Study 2: <b>Tegaderm™ CHG dressing was superior to BIOPATCH® in providing progressive kill of the microflora on unprepped sites at all time points.</b></li> </ul>	Maki et al 2008	Poster presented Society for Healthcare Epidemiology of America (SHEA), April 2008.
In-hospital clinical study (60 patients total: 20 PICC, 20 IJ, and 20 Subclavian). <b>Tegaderm™ CHG dressings provided an innovative method to potentially minimize CRBSI*. The dressing was well-tolerated and judged to be superior to the comparator dressing (IV3000®) with regard to catheter securement and overall satisfaction.</b>	Rupp et al 2008	Poster presented Society for Healthcare Epidemiology of America (SHEA), April 2008.
Skin flora remains and will regrow after prepping with a CHG prep (Chloraprep®). Within 24 hours, <b>Tegaderm™ CHG dressing had significantly lower skin flora regrowth than a standard transparent adhesive dressing. At 7 days, Tegaderm™ CHG dressing had significantly lower skin flora regrowth than BIOPATCH®.</b>	Bashir et al 2008	Poster presented Interscience Conference of Antimicrobial Agents and Chemotherapy (ICAAC)/Infectious Diseases Society of America (IDSA), Oct. 2008.
In-hospital study of Tegaderm™ CHG dressing versus standard Tegaderm™ dressing: <b>Fits into clinical practice as easily as standard Tegaderm™ dressings. As easy to use as Tegaderm™ dressings. Easy to use correctly. No device-related adverse events.</b>	Olson et al 2008	<i>Journal of the Association for Vascular Access (JAVA)</i> , March 2008 Vol 13 No. 1 13-19.
Novel new technology used to discern the presence of CHG on human skin on very fine incremental areas of the skin. <b>The presence of CHG (from Tegaderm™ CHG dressing) on skin under the catheter was demonstrated and CHG levels increased with time, reaching a steady state after 2 days. Demonstrated CHG diffusion under the catheter on skin.</b>	Schwab et al 2008	Poster presented Association for Vascular Access (AVA), Sept. 2008.
<ul style="list-style-type: none"> <li>- Study 1: <b>Zones of inhibition on agar with Tegaderm™ CHG dressing as compared to BIOPATCH® were equivalent every day up to 10 days.</b></li> <li>- Study 2: <b>Demonstrated that CHG is readily available from the Tegaderm™ CHG gel without any additional moisture. BIOPATCH® did not transfer CHG under dry conditions.</b></li> <li>- Study 3: <b>Demonstrated CHG diffusion from the Tegaderm™ CHG gel pad under the catheter on agar.</b></li> </ul>	Schwab et al 2008	Poster presented Infusion Nurses Society (INS), May 2008.
In-hospital clinician survey comparing previous CHG disc to current CHG gel pad dressing. <b>Tegaderm™ CHG dressing was rated as significantly better than BIOPATCH® for application, ease of use, visibility and improved application efficiency. No differences were observed in infection rates.</b>	Meninger et al 2009	Poster presented Association of Vascular Access (AVA), Sept. 2009.

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
No product comparisons. Education on the study of infection rates.	NA	The Study of Bloodstream Infection Rates: Factors You Should Know. 70-2010-7331-2
Tegaderm™ CHG Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Ease of use of 2 CHG dressings</b>	• Healthy volunteers	A Controlled Randomized Prospective Comparative Pilot Study to Evaluate the Ease of Use of a Transparent Chlorhexidine Gluconate Gel Dressing Versus A Chlorhexidine Gluconate Disk in Healthy Volunteers. 70-2010-7090-4
Tegaderm™ CHG Dressings – <b>Use of Tegaderm™ CHG Dressing as the first dressing used after catheter insertion</b>	• Adult patients • CVCs	The Absorptive Abilities of a CHG Gel Dressing: Can Initial Gauze Dressings be Avoided? 70-2010-7261-1
Tegaderm™ CHG Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Evaluation of a novel new CHG dressing</b>	• Adult patients • CVCs	A Multicenter Prospective Open Label Evaluation of the Clinical Performance of a Chlorhexidine Gluconate Antimicrobial Transparent Dressing. 70-2009-9692-7
Tegaderm™ CHG Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Single center evaluation of a novel new CHG dressing</b>	• Adult patients • CVCs	Results of a Clinical Evaluation Completed by an In-patient Infusion Team on a New Chlorhexidine Gluconate-impregnated Dressing. 70-2009-9693-5
Tegaderm™ CHG Dressings – <b>Zone of inhibition and antimicrobial activity against common pathogens</b>	Antimicrobial effect • <i>In-vitro</i> studies on agar plates	Growth Inhibition of Microorganisms Involved in Catheter-Related Infections by an Antimicrobial Transparent IV Dressing Containing Chlorhexidine Gluconate (CHG). 70-2010-7286-8
Tegaderm™ CHG Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Evaluation of a novel new CHG dressing</b>	• Adult patients • CVCs	Evaluation of a New CHG Gel Pad Dressing for Catheter Care. 70-2010-7280-1
Tegaderm™ CHG Dressings BIOPATCH® + Tegaderm™ Transparent Film Dressing – <b>Economic evaluation of 2 CHG dressings</b>	National Survey of CVC Healthcare Professionals	Economic Evaluation of Antimicrobial IV Dressings. 70-2010-7295-9

Key Message	Author	Publication
Statistical considerations and study designs. <b>Reliable infection rate studies require long durations, large sample sizes and statistical input.</b>	Walters et al 2009	Poster presented Association of Vascular Access (AVA), Sept. 2009.
Professional nurses evaluated Tegaderm™ CHG dressing as better than BIOPATCH® for overall performance, ease of application, ease of applying correctly, ease of removal, ability to see IV site, ease of training, intuitive application. Key findings: <b>12 out of 12 clinicians favored the Tegaderm™ CHG dressing over BIOPATCH® in overall performance.</b>	Eyberg et al 2008	<i>Journal of the Association for Vascular Access (JAVA)</i> , Fall 2008.
In-hospital evaluation on patients: <b>Tegaderm™ CHG dressing can be used successfully on the majority of new insertions and appears to reduce the frequency of dressing changes. Cost savings may be realized.</b>	Olson 2009	Poster presented Society for Healthcare Epidemiology of America (SHEA), Mar. 2009.
In-hospital evaluation of the performance of Tegaderm™ CHG dressing among skilled IV nurses who were users of BIOPATCH®. <b>Tegaderm™ CHG dressing was rated significantly better than BIOPATCH® in all of the specific performance comparisons pertaining to ease of application, overall performance, securement of the IV, and removal of the dressing.</b>	Decschneau et al 2008	Poster presented Infusion Nurses Society (INS), May 2008.
In-hospital evaluation on patients: Overall, the <b>Tegaderm™ CHG dressing performance was very good. Compared to BIOPATCH® it was easier to place and remove.</b>	Anderson et al 2008	Poster presented Infusion Nurses Society (INS), May 2008.
<i>In-vitro</i> Zone of Inhibition Study <b>Tegaderm™ CHG dressing was shown to be effective against all classes of organisms associated with Central Venous Catheter (CVC) Infections.</b>	Hensler 2009	European Society of Clinical Microbiology and Infectious Diseases (ECCMID), May 2009.
In-hospital evaluations of Tegaderm™ CHG dressing among skilled IV nurses who were users of BIOPATCH®, Tegaderm™ CHG dressing was the preferred dressing over BIOPATCH®. <b>Tegaderm™ CHG dressing worked well in a variety of specialty units including MICU, SICU, ICU, CCU, oncology, transplant, respiratory and cardiac.</b>	Zehrer 2009	Poster presented Infusion Nurses Society (INS), May 2009.
Economic model based on data from a national survey of Central Venous Catheter (CVC) healthcare professionals and literature sources. <b>Tegaderm™ CHG Dressing could minimize healthcare costs by reducing the costs associated with the misapplication of BIOPATCH®.</b>	Brenner 2009	Poster presented Infusion Nurses Society (INS), May 2009.

# 3M™ Tegaderm™ Transparent Film Dressings Clinical Studies & Publications

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
Tegaderm™ Film Dressing IV3000 Tape and Gauze <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Catheter Colonization</li> <li>– Skin Colonization</li> <li>– Condition of Dressing/Adhesion, Edge Lift</li> <li>– Condition of Site/Visible Moisture</li> </ul>	<ul style="list-style-type: none"> <li>• Adult ICU Patients</li> <li>• Pulmonary Artery Catheters</li> </ul>	<p>A Prospective, Randomized Three-Way Clinical Comparison of a Novel, Highly Permeable, Polyurethane Dressing with 442 Swan-Ganz Catheters 70-2009-1797-2 (Clinical Outcomes Data)</p> <p>A Prospective, Randomized Trial of Gauze and Two Polyurethane Dressings for Site Care of Pulmonary Artery Catheters: Implications for Catheter Management 70-2008-8776-1</p>
Tegaderm™ Film Dressing Tape and Gauze <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Skin Colonization</li> <li>– Catheter Colonization</li> <li>– Wear Time</li> </ul>	<ul style="list-style-type: none"> <li>• Adult Renal Patients</li> <li>• Adult ICU Patients</li> <li>• CVCs, Peripheral Arterial Catheters, Hickman Catheters</li> </ul>	<p>Colonization and Infection Associated with Transparent Dressings for Central Venous, Arterial and Hickman Catheters – A Comparative Trial 70-2009-1797-2 (Clinical Outcomes Data)</p> <p>Colonization and Infection Associated with Transparent Dressings for Central Venous Catheters – A Comparative Trial 70-2008-0807-2 (Abstract reprint)</p>
Tegaderm™ HP Film Dressing Tape and Gauze <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Skin Colonization</li> <li>– Catheter Colonization</li> </ul>	<ul style="list-style-type: none"> <li>• Adult ICU Patients</li> <li>• Non-cuffed CVCs</li> </ul>	<p>A Highly Semipermeable Polyurethane Dressing Does Not Increase the Risk of CVC-Related BSI: A Prospective, Multicenter, Investigator-Blinded Trial. Summarized in “Clinical Outcomes Data.” 70-2009-1797-2</p>
OpSite IV3000 <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Ease of Dressing Application and Removal</li> <li>– Dressing Durability</li> <li>– Moisture Accumulation</li> </ul>	<ul style="list-style-type: none"> <li>• Surgical Patients</li> <li>• CVCs</li> </ul>	<p>A Comparison of Two Transparent Film-Type Dressings in Central Venous Therapy 70-2008-9099-7</p>
Tegaderm™ Film Dressing IV3000 <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Catheter Colonization</li> <li>– Skin Colonization</li> <li>– Moisture Accumulation</li> </ul>	<ul style="list-style-type: none"> <li>• Liver Disease Patients</li> <li>• CVCs</li> </ul>	<p>Do Dressings with Increased Permeability Reduce the Incidence of Central Venous Catheter Related Sepsis? 70-2009-0691-8</p>



Key Message	Author	Publication
<p><u>Comparative, prospective, randomized</u> study of <u>442</u> Swan Ganz (pulmonary artery) catheters comparing IV3000 dressing changed every five days, Tegaderm™ Film dressing changed every five days and tape and gauze changed every two days. <b>No significant difference in moisture levels, edge lift or adhesion between Tegaderm™ Film dressing and IV3000 dressing. No significant difference in skin colonization, catheter colonization or bacteremia between Tegaderm™ Film dressing, IV3000 and tape and gauze dressings.</b></p>	Maki et al 1994	<p>Summarized in "Clinical Outcomes Data" 70-2009-1797-2</p> <p>Published in <i>Critical Care Medicine</i>, Vol. 22, 1994, pp. 1729-1737</p>
<p><u>Comparative, prospective, randomized</u> study on <u>356</u> percutaneously inserted catheter sites comparing outcomes using tape and gauze dressing changed every two days, Tegaderm™ Film dressing changed every two days, and Tegaderm™ Film dressing changed every seven days. <b>No statistically significant difference in CRBSI, catheter colonization or skin colonization between Tegaderm™ Film dressing and tape and gauze dressings changed every two days. No statistically significant difference in CRBSI and catheter colonization, between Tegaderm™ Film dressing changed every seven days and tape and gauze dressings changed every two days. Conclusion: "Tegaderm™ Film dressings changed every two to seven days, provided protection against infection of CVCs and Hickman catheters comparable to standard gauze and tape changed every two days."</b></p>	Maki, Will 1984	<p>Summarized in "Clinical Outcomes Data" 70-2009-1797-2</p> <p>Abstract presented to Surgical Infection Society. April 1984; Association for Practitioners in Infection Control, June 1984, and The 24th Interscience Conference on Antimicrobial Agents and Chemotherapy, October 1984.</p>
<p><u>Large multicenter, investigator-blinded</u> trial comparing outcomes using tape and gauze dressing changed every two days on <u>191</u> catheters and Tegaderm™ HP Film dressing changed every five days on <u>204</u> catheters. <b>No statistically significant difference in CRBSI. Skin and catheter colonization with gauze dressing were significantly lower possibly due to the increased skin prepping frequency (every two days versus every five days). Conclusion: "...data suggests that the use of semipermeable PU (polyurethane) dressing on high-risk, non-cuffed CVCs is safe and does not increase the risk of CVC-related BSI."</b></p>	Maki et al 1994	<p>Summarized in "Clinical Outcomes Data" 70-2009-1797-2</p> <p>Abstract presented to the 36th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), September, 1996 and the Society for Healthcare Epidemiology of America (SHEA), 1997.</p>
<p><u>Comparative, prospective, randomized</u> study comparing the clinical performance with prolonged use of OpSite and IV3000 dressings over subclavian and jugular single-lumen venous catheters in <u>101</u> patients. <b>"No differences between the two dressings were noted with respect to the incidence of complications, such as moisture accumulation or lifting and dressing durability. The low incidence of catheter-related sepsis suggests that transparent adhesive dressings (TADs) do not increase this risk."</b></p>	Wille et al 1993	<p><i>Journal of Hospital Infection</i>, Vol. 23, 1993, pp. 113-121.</p>
<p><u>Comparative, prospective, randomized</u> study on CVCs placed in <u>100</u> critically ill liver disease patients. Tegaderm™ Film dressing versus IV3000 dressing changed every two days. <b>"No statistically significant difference between the two dressings was found in accumulation of fluid, the number of organisms on the skin or incidence of local or systemic infection. No apparent advantage to using IV3000 dressing."</b></p>	Reynolds 1997	<p><i>Intensive and Critical Care Nursing</i>, Vol. 13, 1997, pp. 26-29.</p>

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
Epidemiology of CRBSI's, Treatment and Infection Risk Reduction Strategies	<ul style="list-style-type: none"> <li>• IV Catheter-Related Infection Prevention Measures</li> </ul>	Infections Caused by Intravascular Devices Used for Infusion Therapy: Pathogenesis, Prevention, and Management 70-2008-9638-2
Tegaderm™ Film Dressing Arglaes Dressing <ul style="list-style-type: none"> <li>– Skin Colonization</li> <li>– Catheter Colonization</li> </ul>	<ul style="list-style-type: none"> <li>• ICU Patients</li> <li>• CVC and Peripheral Arterial Catheters</li> </ul>	A Randomized Trial Comparing Arglaes (a transparent dressing containing silver ions) to Tegaderm™ (a transparent polyurethane dressing) for Dressing Peripheral Arterial Catheters and Central Vascular Catheters 70-2009-6329-9
Tegaderm™ Film Dressing Tape and Gauze <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Cost Effectiveness</li> <li>– Quality of Life</li> </ul>	<ul style="list-style-type: none"> <li>• Hemodialysis Patients</li> <li>• Long-term CVCs</li> </ul>	A Prospective, Randomized Trial Comparing a Transparent Dressing and a Dry Gauze on the Exit Site of Long-term Central Venous Catheters of Hemodialysis Patients 70-2009-6327-3
Tegaderm™ Film Dressing Changed 5 or 10 Days and 2 or 5 Days <ul style="list-style-type: none"> <li>– Local Infection</li> <li>– Skin Condition</li> <li>– Cost Effectiveness of Longer Wear Time</li> </ul>	<ul style="list-style-type: none"> <li>• Bone Marrow Transplant Patients</li> <li>• Tunneled and Non-Tunneled CVCs</li> </ul>	Comparison of Two Different Time Interval Protocols for Central Venous Catheter Dressing in Bone Marrow Transplant Patients: Results of a Randomized, Multicenter Study 70-2009-6328-1
Tegaderm™ Film Dressing Tegaderm™ Plus Film Dressing Tape and Gauze <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Skin Colonization</li> <li>– Local Catheter Infection</li> <li>– Phlebitis</li> <li>– Wear Time</li> </ul>	<ul style="list-style-type: none"> <li>• PIVs</li> </ul>	Evaluation of Dressing Regimens for Prevention of Infection with Peripheral Intravenous Catheters 70-2008-3152-0

Key Message	Author	Publication
<p><u>Textbook chapter:</u> Extensive summary of pathogenesis, prevention and treatment of IV catheter-related infections. <b>Not a patient study.</b></p>	Maki 1994	<i>Infections Associated with Indwelling Medical Devices</i> , 2nd Ed., Chapter 8, 1994, pp. 161-177.
<p><u>Comparative, prospective, randomized</u> study on 31 patients comparing the rate of skin colonization and catheter tip colonization when using Arglaes (silver) dressing versus Tegaderm™ Film dressing. Also compared adhesiveness, dressing application and durability. <b>No statistically significant difference in bacterial growth between the two dressings was detected. Some nurses perceived the Arglaes dressing to be more difficult to apply than Tegaderm™ Film dressing. The Arglaes dressing appeared to perform better in securing the catheter and appeared to adhere better than Tegaderm™ Film dressing. “The Arglaes dressing in this study was not able to fulfill its predicted potential even though the average length of time dressings were left in situ was four days.” The authors conclude that aseptic technique during dressing application may be more important than antibacterial properties of the dressing.</b></p>	Madeo et al 1998	<i>Intensive and Critical Care Nursing</i> , Vol. 14, 1998, pp. 187-191.
<p><u>Comparative, prospective, randomized</u> study on 58 hemodialysis patients. Study objectives were to: assess the risk of bacteremia, assess the cost and evaluate the quality of life by using a Tegaderm™ Film dressing versus a dry gauze on the exit site of long-term central catheters. <b>The study results suggest that the incidence of bacteremia was not increased with the use of Tegaderm™ Film dressing. The use of Tegaderm™ Film dressing resulted in fewer dressing changes, lowered total treatment costs, “with no observed unfavorable impact on the quality of life and without significant local complications at the exit site.”</b></p>	Le Corre et al 2003	<i>Journal of Vascular Access</i> , Vol. 4, No. 2, 2003, pp. 56-61.
<p><u>Comparative, prospective, randomized</u> multicenter trial of 399 bone marrow transplant (BMT) patients with tunneled or non-tunneled CVCs. Study compared two different Tegaderm™ Film dressing change intervals in two groups of BMT patients to determine effects on local infection and skin condition. Group A (tunneled CVCs) randomized to five or ten day change. Group B (standard CVCs) randomized to two or five day change. Tegaderm™ Film dressings were used on all patients. <b>The longer change intervals (ten day on tunneled and five day on standard CVCs) did not show a significant increase in the rate of local infections, led to fewer skin problems and were more cost effective. The longer change interval did not raise the risk of local infections while it significantly reduced patient discomfort and costs.</b></p>	Rasero et al 2000	<i>Haematologica</i> , Vol. 85 (3), 2000, pp. 275-279.
<p><u>Comparative, prospective, randomized</u> study on 2,088 peripheral IVs. Compared four dressing regimens: tape and gauze, Tegaderm™ Film dressing and Tegaderm™ Plus Film dressing each left on for the duration of the catheter, and tape and gauze replaced every other day. <b>The four dressings provided comparable wear time. Moisture accumulated more under the Tegaderm™ Film dressing. Local catheter related infection did not differ significantly between the dressings regimens. No catheter-related bacteremia occurred. Either Tegaderm™ Film dressing or sterile gauze can be used and remain on until the peripheral catheter is removed.</b></p>	Maki, Ringer 1987	<i>JAMA</i> , Vol. 258, 1987, pp. 2396-2403.

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
Tegaderm™ Film Dressing Paper Tape and Gauze <ul style="list-style-type: none"> <li>– Infection</li> <li>– Phlebitis</li> <li>– Dressing Adherence</li> <li>– Cost Effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Oncology Patients</li> <li>• CVCs</li> </ul>	Comparison of Transparent Dressing to Paper Tape Dressing Over Central Venous Catheter Sites 70-2008-1522-6
Tegaderm™ Film Dressing Tape and Gauze <ul style="list-style-type: none"> <li>– Local and Systemic Complications</li> <li>– Patient Comfort</li> <li>– Cost Effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Bone Marrow Transplant Patients</li> <li>• Long-term CVCs</li> </ul>	A Comparison of Transparent Adherent and Dry Sterile Gauze Dressings for Long-term Central Catheters in Patients Undergoing Bone Marrow Transplant 70-2008-5166-8
Transparent Semipermeable Adhesive Dressings <ul style="list-style-type: none"> <li>– CRBSI</li> </ul>	<ul style="list-style-type: none"> <li>• High-risk patients with short-term, non-cuffed CVCs</li> </ul>	Transparent Polyurethane Dressings Do Not Increase the Risk of CVC-related BSI: A Meta-Analysis of Prospective Randomized Trials 70-2009-0702-3
Tegaderm™ Film Dressing Tape and Gauze <ul style="list-style-type: none"> <li>– Cost Effectiveness</li> <li>– Local Complications, Phlebitis</li> <li>– Infection</li> <li>– Wear Time</li> <li>– Catheter Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Outpatients–Home Infusion</li> <li>• CVCs</li> <li>• PIVs</li> </ul>	Comparison of Transparent Dressings to Tape and Gauze for Intravenous Catheters in Home Environment 70-2008-1674-5
Tegaderm™ Film Dressing Silk Tape and Gauze <ul style="list-style-type: none"> <li>– Catheter Stability</li> <li>– Phlebitis</li> <li>– Skin Colonization</li> <li>– Skin Integrity</li> </ul>	<ul style="list-style-type: none"> <li>• Premature Neonatal ICU Patients</li> <li>• CVCs used for TPN</li> </ul>	Central Line Dressing Material and Neonatal Skin Integrity 70-2008-3746-9
Use of Maximal Sterile Barrier Precautions Versus Minimal Barriers for Insertion of CVCs <ul style="list-style-type: none"> <li>– CRBSI</li> <li>– Cost Effectiveness</li> <li>– Maximum Versus Minimum Aseptic Precautions</li> </ul>	<ul style="list-style-type: none"> <li>• Cancer Patients</li> <li>• Non-tunneled CVCs</li> </ul>	Prevention of Central Venous Catheter-Related Infections by Using Maximal Sterile Barrier Precautions During Insertion 70-2008-8138-4

Key Message	Author	Publication
Comparative, prospective, randomized study on 365 cancer patients receiving central venous therapy, divided into two groups: tape and gauze versus Tegaderm™ Film dressing. Tegaderm™ Film dressings were worn significantly longer (4.0 days) than the gauze and tape dressings (2.4 days). Tegaderm™ Film dressings worn for up to seven days did not increase the risk of phlebitis or infections and were equivalent to paper tape dressings worn for shorter periods with respect to incidence of phlebitis and infections. There was no statistically significant difference in complication rates between the two dressing groups. Transparent dressings are safe to use in high infection risk patients and seemed to improve patient comfort.	Lawson et al 1986	NITA, Vol. 9, No. 1, 1986, pp. 40-43.
Comparative, prospective, randomized study of 98 bone marrow transplant patients compared Tegaderm™ Film dressing changed every four days and gauze dressing changed daily. No significant differences were found in incidence of bacteremia, skin colonization, or local complications, except Tegaderm™ Film dressing caused less skin irritation. Transparent dressings are safe for use in high infection risk patients. Tegaderm™ Film dressings were preferred by the patients and were cost-effective in terms of supply costs and nursing time.	Shivnan et al 1991	Oncology Nursing Forum, Vol. 18, No. 8, 1991, pp. 1349-1356.
A meta-analysis of seven comparative, prospective randomized trials. Inclusion criteria: 1) compared transparent semi-permeable adhesive polyurethane dressings to tape and dry gauze dressings on patients with high-risk, non-cuffed CVCs for short-term access; 2) unambiguous microbiologically-based criteria for CVC-related BSI; and 3) adequate data confirming comparability of patients and CVCs in the treatment groups. The meta-analysis data “suggest strongly that polyurethane dressings used on high-risk, non-cuffed CVCs used for temporary access do not increase the risk of CVC-related BSI.”	Maki, Mermel 1997	Presented at Society for Healthcare Epidemiology of America (SHEA) 7th Annual Scientific Meeting, 1997, Vol. 18, No. 5, Part 2, p. 51.
Comparative, prospective randomized study of Tegaderm™ Film dressing versus tape and gauze over IV catheters on 92 patients in the home environment. Tegaderm™ Film dressing “represented a cost savings for central catheters, but was slightly more expensive for peripheral catheters.” No significant differences in infection, signs of phlebitis, denuding of skin, puritis or adhesion were seen. Tegaderm™ Film dressing was worn longer and provided greater catheter stability and site observation than a tape and gauze dressing.	Berry et al 1986	Abstract presented to National Intravenous Therapy Association, May 1986.
Comparative, prospective, randomized study on 32 neonates with silk tape and gauze (three changes per week) compared with Tegaderm™ Film dressing changed weekly. No significant difference in skin flora was seen between the two groups. The study demonstrated that Tegaderm™ Film dressing protects the premature infant’s skin more than tape dressing. The transparent adhesive dressing material “may be inherently more suitable for friable skin than a traditional tape material.” There was a trend toward increased occurrence of purulence and catheter dislodgement in the tape and gauze group.	Kellam et al 1987	Nutrition in Clinical Practice, 1987.
Comparative, prospective, randomized study on 344 cancer patients. Compared the effect of using maximal aseptic precautions to minimal aseptic precautions for central venous catheter insertions. All sites were dressed with Tegaderm™ Film dressings over sterile gauze. Infections were 6.3 times higher in the minimal precautions group compared to the maximal sterile, precautions group. The use of maximal barrier precautions is highly cost effective.	Raad et al 1994	Infection Control and Hospital Epidemiology, Vol. 15, No. 4, 1994, p. 231-238.

# 3M™ Tegaderm™ Transparent Film Dressings Clinical Studies & Publications (Continued)

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
Tegaderm™ Film Dressing OpSite Uniflex Tape and Gauze Saran Wrap – Skin Colonization	<ul style="list-style-type: none"> <li>• Healthy Volunteers in a Laboratory</li> <li>• Long-term Patients on Antibiotic Therapy</li> </ul>	Restriction of Bacterial Growth Under Commercial Dressings 70-2008-3564-6
Tegaderm™ Film Dressing Tegaderm™ HP Film Dressing IV3000 – Bacterial Growth – Moisture Handling Properties	<ul style="list-style-type: none"> <li>• Healthy Volunteers</li> <li>• Chest Skin Sites</li> </ul>	Investigation of Bacterial Growth and Moisture Handling Properties of Transparent Dressings 70-2009-1859-0
Tegaderm™ Film Dressing Tegaderm™ Plus Film Dressing Ensure OpSite Tape and Gauze Saran Wrap – Skin Flora under Dressings	<ul style="list-style-type: none"> <li>• Adult Inpatients</li> <li>• Abdominal Skin Sites</li> </ul>	Transparent Adhesive Dressings Do Not Promote Abnormal Skin Flora 70-2008-3406-0
Tegaderm™ Film Dressing – Skin Colonization	<ul style="list-style-type: none"> <li>• ICU Patient</li> <li>• Upper Arms</li> </ul>	Tegaderm™ Dressings Prevent Recolonization of Chlorhexidine-Treated Skin 70-2008-5461-3



Key Message	Author	Publication
<p><u>Comparative, controlled</u> human volunteer study on <u>99</u> subjects evaluating skin flora under Tegaderm™ Film dressing, OpSite and Uniflex dressings, sterile gauze and tape, and Saran Wrap held in place with 3M™ Micropore™ Surgical Tape placed on disinfected intact skin. Skin flora was assessed after three days. <b>No significant difference for microbial flora was seen between dressing types. All clinical dressings maintained normal skin flora at one-tenth the population of uncovered skin. The Saran Wrap control grew 100-fold more bacteria than uncovered skin. At day three, the Tegaderm™ Film dressing had significantly less lift than either OpSite or Uniflex dressings.</b></p>	Aly et al 1988	<i>American Journal of Infection Control</i> , Vol. 16, No. 3, 1988, pp. 95-100.
<p><u>Prospective, randomized block, controlled</u> comparison of bacterial flora and moisture vapor transmission under dressings studied on <u>60</u> subjects. Sites were prepped with three swabs of 70% isopropyl alcohol followed by three applications of 10% povidone-iodine.</p> <p><b>Results of bacterial flora comparisons between Tegaderm™ Film Dressing, Tegaderm™ HP Film Dressing and IV3000 showed: 1) no significant differences in bacterial counts at five days, 2) significantly lower bacterial counts with all three transparent dressings compared with tape and gauze dressings at five days, 3) bacterial counts under the three transparent dressings were below pre-prep levels and uncovered skin levels at five days and 4) transparent dressings provide a protective effect, which minimizes bacterial levels versus tape and gauze.</b></p> <p><b>Results of evaporimeter tests showed: 1) no significant difference in evaporation of moisture through the dressings, 2) no significant difference in accumulation of moisture under the dressings, 3) although evaporation rates were significantly higher with tape and gauze, bacterial counts were significantly higher and 4) there is no correlation between bench MVTR data and actual evaporation properties when measured on skin.</b></p>	Aly et al 1998	Summarized in "Investigation of Bacterial Growth and Moisture Handling Properties of Transparent Dressings" 70-2009-1859-0
<p><u>Comparative, controlled, randomized</u> inpatient study. Re-growth of bacteria tested on eight abdominal sites of <u>47</u> adult inpatient volunteers. Three skin prep protocols were used: 1) no antiseptic, 2) betadine but no dressing, and 3) betadine covered with one of six dressings (Saran Wrap, tape and gauze, Ensure, OpSite, Tegaderm™ Film dressing or iodine-impregnated Tegaderm™ Film dressings.) Skin flora tested two days after application. Betadine was reapplied, fresh dressings were applied for four to seven days and skin flora tested. <b>After two days, no significant difference in microbial counts for any of the various treatments was detected. At four to seven days, only gauze and Saran Wrap had a statistically significant increase over day two microbial counts. "Transparent adhesive dressings appear to inhibit reintroduction of normal flora after betadine applications and do not otherwise lead to abnormal skin flora."</b></p>	Rhame et al 1983	Abstract presented to the Association for Practitioners in Infection Control (APIC), 1983.
<p><u>Comparative, prospective</u> study comparing the skin flora on the upper outer arms of <u>55</u> ICU patients, with and without a 4% CHG solution covered with Tegaderm™ Film dressing. An adjacent, exposed skin site was used as a control. The researchers found: <b>1) some reduction of the aerobic skin flora on intact, untreated skin covered with Tegaderm™ Film dressing compared to the control site at five days, 2) a significant difference between the CHG disinfected arm and the untreated arm after protection with Tegaderm™ Film dressing at five days and 3) the skin flora remained unchanged at a low level when the skin was treated with CHG and covered by Tegaderm™ Film dressing for five days. "The Tegaderm™ Film dressing has a protective effect and is not permeable to bacteria from the surroundings."</b></p>	Holmstrom, Svensson 1987	<i>Journal of Hospital Infection</i> , Vol. 10, 1987, pp. 287-291.

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
<b>Editorial – IV Catheter-Related Infection Risk Reduction Strategies</b>	• CVCs	Yes, Virginia, Aseptic Technique Is Very Important: Maximal Barrier Precautions During Insertion Reduce the Risk of Central Venous Catheter-Related Bacteremia 70-2008-8137-6
<b>Review Article – IV Catheter-Related Infection Risk Reduction Strategies</b>	• IV Catheter-Related Infection Prevention Measures	Prevention of Intravascular Catheter-Related Infections 70-2008-8775-3
<b>Review Article – Infectious Complications of Pulmonary Artery Catheters</b>	• Pulmonary Artery Catheters	Infectious Complications of Swan-Ganz Pulmonary Artery Catheters 70-2008-8136-8
Tegaderm™ IV Securement Dressing for the BD Nexiva™ Catheter System Standard flat film dressing <ul style="list-style-type: none"> <li>– Catheter Stabilization</li> <li>– Catheter Securement</li> <li>– Ease of Application</li> <li>– Wear Time</li> <li>– Patient Comfort</li> <li>– Clinician Preference</li> </ul>	• Adult Hospitalized Patients • Short Peripheral IV Catheters	Peripheral IV Catheter and Dressing System for Improved Catheter Stabilization 70-2010-7111-8

Tegaderm™ Film Dressing Tape and Gauze <ul style="list-style-type: none"> <li>– Ease of Use</li> <li>– Comfort</li> <li>– Healing Time</li> <li>– Cost Effectiveness</li> <li>– Waterproof</li> <li>– Healing Outcomes</li> </ul>	• Breast Surgery	Tegaderm™ versus Gauze Dressing in Breast Surgery 70-2008-0801-5
Tegaderm™ Film Dressing Wet to Dry Gauze Dressing <ul style="list-style-type: none"> <li>– Cost Effectiveness</li> <li>– Comfort</li> <li>– Healing Time</li> <li>– Barrier Properties</li> <li>– Autolysis</li> </ul>	• Stage II and III (Grade II and III) Pressure Ulcers	Pressure Ulcer Management in Home Health Care: Efficacy and Cost Effectiveness of Moisture Vapor Permeable Dressing 70-2008-2359-2



Key Message	Author	Publication
<u>Editorial.</u> Utilizes various references to demonstrate how maximal barrier precautions and level of staff training impact CVC-related bacteremia. <b>Transparent adhesive dressings were associated with a very low risk of infection when maximal barrier precautions were used. The use of maximal barriers is highly cost effective and reduces the incidence of CVC-related bloodstream infection. Not a patient study.</b>	Maki 1994	<i>Infection Control and Hospital Epidemiology</i> , Vol. 15, No. 4, 1994, pp. 227-230.
<u>Summary</u> of clinical practices, procedures, devices, skin preps and antibiotics used in the prevention of intravascular catheter-related infections. <b>Not a patient study.</b>	Mermel 1994	<i>Infectious Diseases in Clinical Practice</i> , Vol. 3, No. 5, 1994, pp. 391-398.
<u>Summary</u> of Pulmonary Artery (PA) Catheter complications. Reviews syndromes, microbial profile, pathogenesis, epidemiology, and risk factors of CRBSI. Infection prevention, diagnosis and management are presented. <b>Insertion of PA catheters with minimal barrier precautions (sterile gloves and a sterile drape only) is associated with a significantly increased risk of catheter-related infections. Cutaneous colonization, contamination of catheter hub or contaminated infusate all impact PA catheter-related infections. Infection risk can be reduced with use of maximal barrier precautions at catheter insertion, use of cutaneous antiseptics, limiting catheter duration, and possibly with heparin-bonded catheters. Not a patient study.</b>	Mermel and Maki 1994	<i>American Journal of Respiratory and Critical Care Medicine</i> , Vol. 149, 1994, pp. 1020-1036.
A two-week, multicenter preference study of 107 IV clinicians comparing the performance of the Tegaderm™ IV dressing for the Nexiva™ IV Catheter System to the film dressing they currently use with the BD Nexiva™ Catheter System. <b>96% of the clinicians preferred Tegaderm™ IV Dressing for the BD Nexiva™ Closed IV Catheter System over their current dressing used with the BD Nexiva™ Catheter System. When rating ease of application, ease of removal, patient comfort, wear time, and adhesive residue, the Tegaderm™ IV Dressing for the BD Nexiva™ Catheter System was found to be superior to the clinician's current dressing (p&lt;0.0001). Also, Tegaderm™ IV Dressing for the BD Nexiva™ Catheter System had a statistically significant higher mean score for perceived reduction in catheter movement, dislodgement, or fall-outs than the currently used IV dressing (p&lt;0.0001). Tegaderm™ IV Dressing for the BD Nexiva™ Catheter System was shown to be an excellent alternative to the current IV dressings used with the BD Nexiva™ Catheter System.</b>	Caillouet et al 2008	Poster presented Association for Vascular Access (AVA), Sept. 2008.
<u>Comparative, prospective, randomized</u> study of dry gauze vs. Tegaderm™ Film dressing on wounds of 120 breast surgery patients. <b>A significantly better final wound appearance was found by the medical staff on assessment of the wounds covered with Tegaderm™ Film dressings compared to the wounds covered with gauze. Tegaderm™ Film dressing was associated with better wound healing, easy application and an estimated cost reduction.</b>	Moshakis et al 1984	<i>The British Journal of Clinical Practice</i> , Vol. 38, No. 4, 1984, pp. 149-152.
<u>Comparative, prospective, randomized</u> study in home care setting comparing wet to dry gauze dressing to Tegaderm™ Film dressing on 48 patients with 77 pressure sores. <b>The healing rates for grade III ulcers were not significantly different in the two dressing groups. Tegaderm™ Film dressing was more cost effective and showed improved healing on grade II ulcers. The median improvement rate for grade II pressure ulcers was 100% for the Tegaderm™ Film dressing and 52% for the wet to dry gauze dressing.</b>	Sebern 1986	<i>Archives of Physical Medicine and Rehabilitation</i> , Vol. 67, 1986, pp. 726-729.

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
Tegaderm™ Film Dressing Hydrous Lanolin Gauze – <b>Comfort</b> – <b>Cost Effectiveness</b> – <b>Healing Time</b> – <b>Infection</b>	• Radiation Skin Reactions	Comparison of Moisture Vapor Permeable (MVP) Dressings to Conventional Dressings for Management of Radiation Skin Reactions 70-2008-1431-0
Tegaderm™ Film Dressing OpSite Tape and Gauze – <b>Healing Time</b> – <b>Time to Reharvest Donor Skin</b> – <b>Comfort</b>	• Skin Graft Donor Sites	Scalp as Skin Graft Donor Site: Rapid Reuse with Synthetic Adhesive Moisture Vapor Permeable Dressings 70-2008-4036-6
Tegaderm™ HP Film Dressing – <b>Comfort</b> – <b>Wear Time</b> – <b>Skin Condition</b>	• Chronic Wounds: Secondary Dressing	Evaluation of a Sacral Shaped Transparent Dressing Over Contoured and High Stress Areas 70-2009-0693-4
Tegaderm™ HP Film Sacral Dressing – <b>Cost Effectiveness</b> – <b>Wear Time</b>	• Chronic Wounds: Secondary Dressing	Management of a Peristomal Ulcer using a Calcium Alginate Dressing with a Sacral Shaped Transparent Dressing 70-2009-1575-2
Tegaderm™ Film Dressing OpSite Biocclusive Gauze with Petroleum or Antimicrobial Ointment – <b>Healing Outcomes</b> – <b>Healing Time</b> – <b>Comfort</b>	• Surgical Wounds	Use of Semiocclusive, Transparent Film Dressings for Surgical Wound Protection: Experience in 3,637 Cases 70-2009-0809-6
Tegaderm™ Film Dressing – <b>Wear Time</b> – <b>Secural</b>	• Complex Enterocutaneous Fistula	Options in Practice: Management of a Complex High-Output Fistula 70-2009-1704-8
Tegaderm™ Film Dressing OpSite – <b>Wound Healing Time</b> – <b>Waterproof</b> – <b>Wear Time</b>	• Surgical Incisions	Evaluation of Transparent Dressing for Postoperative Wounds 70-2008-0808-0

Key Message	Author	Publication
<u>Comparative, prospective, randomized pilot study</u> on 16 patients with moderate and severe radiation skin reactions. Compared gauze with hydrous lanolin to Tegaderm™ Film dressing. <b>The Tegaderm™ Film dressing group showed a trend of faster healing time over the gauze with hydrous lanolin. However, the trend of faster healing time was not significantly different. Fewer days of discomfort and sustained pain relief was observed with Tegaderm™ Film dressing.</b>	Shell et al 1986	<i>Oncology Nursing Forum</i> , Vol. 13, No. 1, 1986, pp. 11-16.
<u>Comparative, prospective, randomized study</u> of Tegaderm™ Film dressing, OpSite dressings and mesh gauze on 24 patients with 60 split thickness graft donor sites. <b>Use of Tegaderm™ Film dressing on a scalp donor site provided an optimal wound environment allowing for more rapid skin reharvesting compared to a gauze dressing.</b>	Barnett et al 1983	<i>The Journal of Trauma</i> , Vol. 23, No. 2, 1983, pp. 148-151.
A <u>multi-site case study</u> evaluation of Tegaderm™ HP Film sacral dressing on 19 patients to assess the functional capabilities of this special shaped dressing, when used as a secondary dressing over alginate and hydrogel. Wounds of the sacrum, breast, legs, feet/toes and heels were accessed. <b>The contoured shape of the dressing was found to be effective in covering wounds on body areas that curve. Using the transparent adhesive dressing in combination with a hydrogel keeps the wound hydrated, prevents periwound maceration and promotes less disruption of the healing process.</b>	Gokoo et al 1997	3M Published Literature.
<u>Case study</u> on one patient with a non-healing peristomal ulcer. <b>Tegaderm™ Film sacral dressing used in combination with an alginate and a drainable pouch reduced the peristomal ulcer size by approximately two-thirds over six weeks.</b>	O'Brien et al 1998	3M Published Literature.
<u>Non-randomized, comparative</u> , three phase study over an eight year period. 3637 surgical wound patients were treated with either OpSite, Bioclusive or Tegaderm™ Film dressings and compared to traditional dressings (gauze with Petroleum or Antimicrobial ointment). <b>The semi-occlusive transparent film dressings resulted in faster wound healing, decreased pain and less scarring. Study confirms that semi-occlusive film dressings are appropriate for all types of clean, surgical wounds in a variety of locations, including curved or irregular surfaces and joints.</b>	Rubio 1991	<i>International Surgery</i> , Vol. 76, No 4, Dec. 1991, pp. 253-254.
<u>Case study</u> on one patient. Tegaderm™ Film dressing was used to increase the security of a system for managing a complex high-output fistula. The use of an alcohol-free skin protectant (3M™ Cavilon™ No Sting Barrier Film) is suggested when the skin becomes irritated. <b>Tegaderm™ Film dressing and Cavilon No Sting Barrier Film skin protectant can be used as part of a system for the successful management of an enterocutaneous fistula.</b>	Hanlon 1998	<i>Journal of Wound, Ostomy and Continence Nursing</i> , Vol. 25, No. 4, 1998, pp. 217-220.
<u>Comparative, prospective, randomized study</u> placing Tegaderm™ Film or OpSite dressings over surgical incisions on 98 patients. <b>No statistically significant difference seen between Tegaderm™ Film and OpSite dressings with regard to the incidence or amount of exudate, dressing adherence or wound healing time. OpSite dressing showed a significantly higher level of residue on the skin compared to Tegaderm™ Film dressing. Transparent dressings are suitable for use on clean and clean contaminated operative incisions.</b>	Vazquez 1983	Oral Presentation at the Association for Practitioners in Infection Control Symposia, 1983.

Dressings Compared/Outcomes Studied	Clinical Focus	Article Title
Tegaderm™ Film Dressing OpSite Dry Gauze <ul style="list-style-type: none"> <li>– Healing Time</li> <li>– Comfort</li> <li>– Adhesion</li> <li>– Infection Rates</li> </ul>	<ul style="list-style-type: none"> <li>• Skin Graft Donor Sites</li> </ul>	Comparison of Synthetic Adhesive Moisture Vapor Permeable and Fine Mesh Gauze Dressings for Split-Thickness Skin Graft Donor Sites 70-2008-3316-1
Tegaderm™ Film Dressing DuoDERM Extra Thin Dressings <ul style="list-style-type: none"> <li>– Moisture Handling (Maceration)</li> <li>– Wear Time</li> </ul>	<ul style="list-style-type: none"> <li>• Community Patients</li> <li>• Secondary Dressing on Acute and Chronic Wounds</li> </ul>	A Study to Compare Two Film Dressings Used as Secondary Dressings 70-2009-0730-4
<b>Review Article – Moist Wound Healing and Autolysis</b>	<ul style="list-style-type: none"> <li>• Necrotic Tissue</li> <li>• Debridement</li> </ul>	Autolysis: A Clinical Approach to Selective Wound Debridement 70-2009-1739-4
Tegaderm™ Film Dressing Silicone Dressings <ul style="list-style-type: none"> <li>– Symptom Reduction</li> <li>– Ease of Use</li> <li>– Cost Effectiveness</li> <li>– Cosmesis</li> <li>– Waterproof</li> </ul>	<ul style="list-style-type: none"> <li>• Keloids</li> </ul>	Transparent Polyurethane Dressing Reduces Keloid Symptoms 70-2009-1860-8

Key Message	Author	Publication
Comparative, prospective, randomized study of Tegaderm™ Film dressing, OpSite dressings and mesh gauze on 60 skin graft donor sites. Pain, rate of healing, adhesion and infection rate were evaluated. <b>Tegaderm™ Film and OpSite dressings are significantly better than fine mesh gauze for healing of split-thickness graft donor sites. Healing occurred more rapidly and with less pain when transparent dressings were used compared to gauze. No clinically significant difference in Tegaderm™ Film and OpSite dressings.</b>	Barnett et al 1983	<i>The American Journal of Surgery</i> , Vol. 145, 1983, pp. 379-381.
Comparative, prospective, randomized study comparing Tegaderm™ Film dressings to DuoDERM Extra Thin film dressings as secondary dressings on 100 patients with acute or chronic wounds. <b>The results demonstrated that Tegaderm™ Film dressing was statistically easier to apply than DuoDERM dressing. No statistically significant difference was demonstrated between the dressings in terms of their ability to resist wrinkling or prevent maceration (the primary outcome). Incidence of maceration appears to depend on wound type more than the dressing used.</b>	Thomas et al 1997	<i>Journal of Wound Care</i> , Vol. 6, No. 7, July 1997, pp. 333-336.
<u>Review Article</u> : Describes the physiological basis for autolysis in the wound repair process, the advantages and limitations of autolysis and its clinical applications. <b>Autolysis is a method of necrotic tissue removal. A moist wound environment offers caregivers both a clinically and economically effective debridement approach.</b>	Bryant and Rolstad 1999	3M Published Literature.
Small, non-randomized, prospective eight week study on 10 patients showing the effect of Tegaderm™ Film dressing on the reduction of the associated symptoms and height of keloids. <b>Compared to the patients' baseline values, there was an 18% reduction in keloid height and a reduction in symptoms. Tegaderm™ Film dressing is more cost effective than the currently used silicone dressings.</b>	Talsma 1999	<i>Dermatology Times</i> , March 1999.





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