

Advanced Wound Care (AWC) Market in India

Agenda

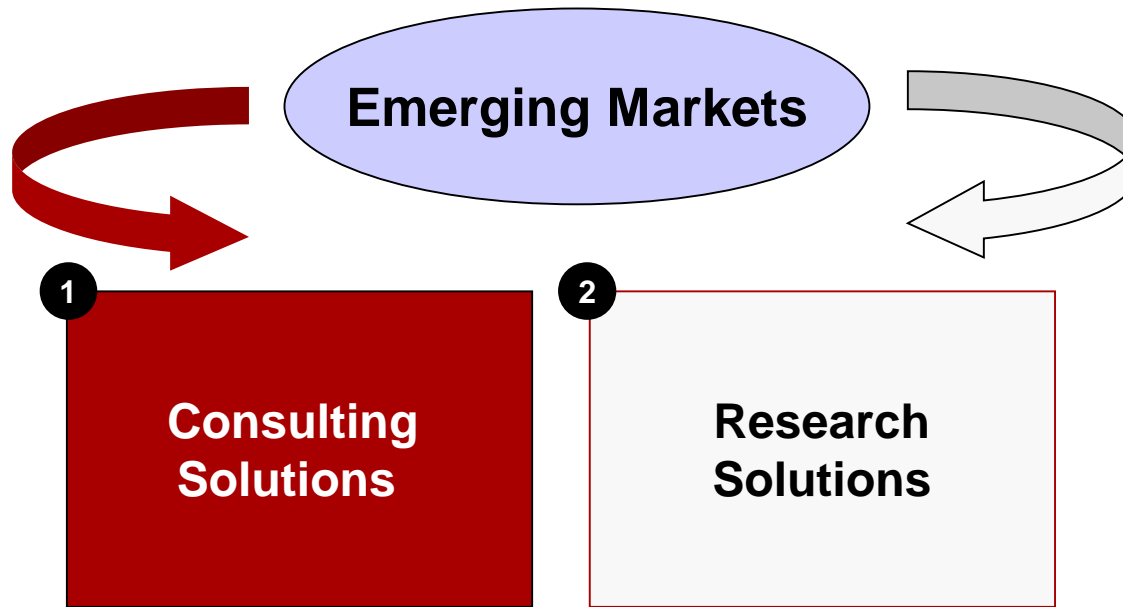
- About RedSeer Consulting
- Overview of Indian AWC Market

Agenda

- **About RedSeer Consulting**

- **Overview of Indian AWC Market**

RedSeer Consulting helps companies succeed in emerging markets

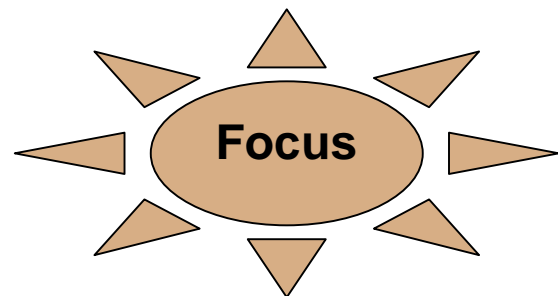


1. ~2 Years of Existence
2. One Team – One Client Approach
3. Clientele of Fortune- 500 and Leading Organizations
4. Best in Class Team
5. 100% Client Referrals
6. ~300% YoY Growth

Research

Consulting

Our Focus Areas – Our Core Expertise



Industry Verticals

Practice Areas

	BFSI	Education	Healthcare	Technology	Telecom
Operations Improvement					
Organization Change					
Outsourcing					
Strategic Initiatives					
Growth Strategies					
On Demand Support					

RedSeer Management Team

Anil Kumar

Anil comes with a strong experience in Research and Consulting space, he has successfully advised various Fortune 100 clients on Operations, Strategies, and Organization Change. Emerging market is a keen interest area for him.

Anil brings a broad-based experience across various verticals including Information Technology, Engineering Companies, and Manufacturing.

Before founding RedSeer, Anil was working as Engagement Manager at Zinnov Management Consulting.

Anil is a Bachelor of Technology from IIT Delhi. He can be reached at anil@redseerconsulting.com

Kirti Saboo

Kirti has varied experience with management consulting industry. Offshoring/ Outsourcing, and Due diligence are some of the areas where Kirti has executed key engagements.

Kirti brings a broad-based experience across Information Technology, Pharmaceuticals, Healthcare, Telecom, Banking, and Print & Publishing

Before RedSeer, Kirti worked for The Parthenon Group- London, McKinsey & Co – India and Zinnov Management Consulting

Kirti is an MBA from ISB and Bachelors in Commerce from LSR, Delhi. She can be reached at kirti@redseerconsulting.com

Sanket Gupta

Sanket brings strong expertise in advising clients around the area of growth strategy, market assessment and offshoring. He has managed and authored global thought leadership pieces in the financial services domain.

IT Strategy and Process Improvement are some of his keen areas of interest. He also had a stint with manufacturing company in strategy role.

Prior to RedSeer, he worked with Capgemini, Oracle and D'Decor.

Sanket is an MBA from ISB Hyderabad, where he was a part of Dean's list and received other academic honors. He also holds a Bachelor of Technology degree from IIT Delhi. He can be reached at sanket@redseerconsulting.com

Health Care Experts

Vishal Ranjan – Over 6 Years Experience in Healthcare

Vishal has more than six years of management consulting experience with MNCs in setting up businesses and devising growth strategies. He has advised many Fortune-100 companies on Business Process Re-engineering, Market Entry Strategy, India market strategy, growth strategy and business planning. Vishal has over four years of core experience in advising hospitals on managing costs, operations and new/raw service offerings.

Vishal is the founding partner of Asclepius Consulting. He is an alumnus of IIT Delhi and IIM Calcutta.

Dr. Rekha–Over 13 years experience in Healthcare

- More than 5 years experience in area (s) related to Health Informatics and with 7 yrs of experience as General Medical Practitioner in Medicine, Pediatrics and Anesthesia
- Systems Engineer, GE Healthcare, Bangalore (2008 to 2010)
- Research Fellow, University of Auckland (2006 to April 2008)
- Masters in Health Informatics at Dalhousie University, Canada in fall of 2005/2006
- CIHR PhD/Post Doctoral Research Strategic Training Program (2005-2006)
- Research Associate in College of Pharmacy, Dalhousie University, Canada
- Resident of Drug Use Management and Policy Research Program, Dalhousie University, Canada

Suresh Gangam 6 years experience in Healthcare and FMCG

- Worked on multiple market entry engagements for Healthcare players (from supply and demand side)
- Market entry strategy engagements for across the industry players
- Suresh is an alumnus of IIT Bombay,

An Illustrative Clientele

booz&co.



THE PARTHENON GROUP



Private Equity



Arthur D Little

SIEMENS



BARCLAYS



P&G



Background of our team

Team Background

McKinsey&Company



THE PARTHENON GROUP



GE Healthcare

ORACLE®

Capgemini
CONSULTING. TECHNOLOGY. OUTSOURCING

ALSTOM

zinnov

Beca



Academic Background



IIT Delhi



Our differentiating factors¹

- RedSeer is focused on providing “**Global expertise**” to “**Organizations**” in “**Emerging markets**”.
- **Expertise of consultants:**
 - Worked on multiple aspects of health care – from entry strategy to operational efficiencies (including Medical Consumables)
 - RedSeer Partners have executed multiple projects on advising mid and large sized hospitals in optimizing costs and operations
 - Robust experience with Product portfolio extension of leading organizations across the globe
- **Team at RedSeer Consulting**
 - 100% of our core team is from top Business and Technology schools.
 - We bring in world class consulting expertise to all our engagements
- **Testimonial**
 - 100% Client referrals, 100% Repeat Business

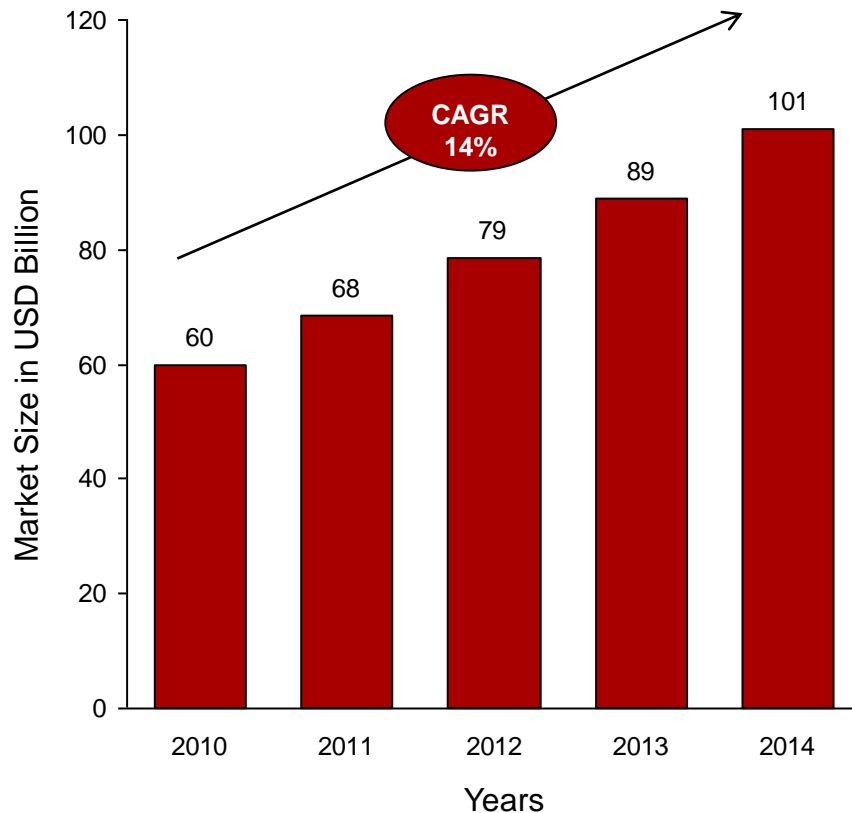
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- About RedSeer Consulting

- Overview of Indian AWC Market

Indian healthcare sector is expected to create an additional opportunity of ~ USD 40 billion in next 4 years

**Indian Healthcare Market
(2010-2014)**

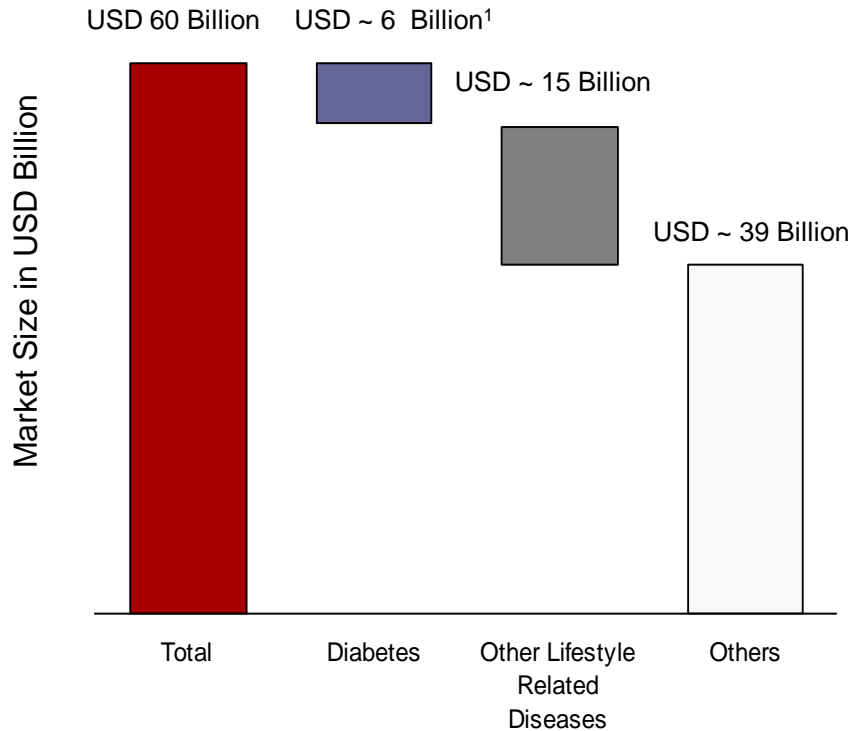


Growth Drivers for Niche Healthcare Market

Demand Side	Supply Side
<ul style="list-style-type: none">Economic status of population is rising and better healthcare policies are being adopted by employersHealth insurance market is growing at a fast pace with health insurance gross premium expected to grow at a CAGR of 26% (2010 – 2013).Lifestyle related diseases like Cancer, Cardio vascular diseases (CVD) & Diabetes are on a riseIndia is getting developed as a medical tourism hub expected to grow at a CAGR of ~19% (2011-2013)	<ul style="list-style-type: none">Indian and MNC hospital brands are gearing up to serve the increased demandGovernment is taking initiatives to improve healthcare standards by programs like NRHM and investing in ramping up Government Medical CollegesIndian Healthcare market is attracting significant PE, VC and Foreign investmentsTechnology is playing an increasing role in Indian Healthcare sector (e.g. telemedicine)

Increase in lifestyle related diseases is one of the major growth drivers for Indian healthcare market

Indian Healthcare Market- By Diseases (2010)



Discussion

- With 50.8 million diabetics², India has 18% of Global diabetic Population
- Cardiac , Oncology and Diabetes together will account for 16.8% of the hospitalization cases in India in 2011
- Diabetes accounts for 11% of the total healthcare expenditure of India

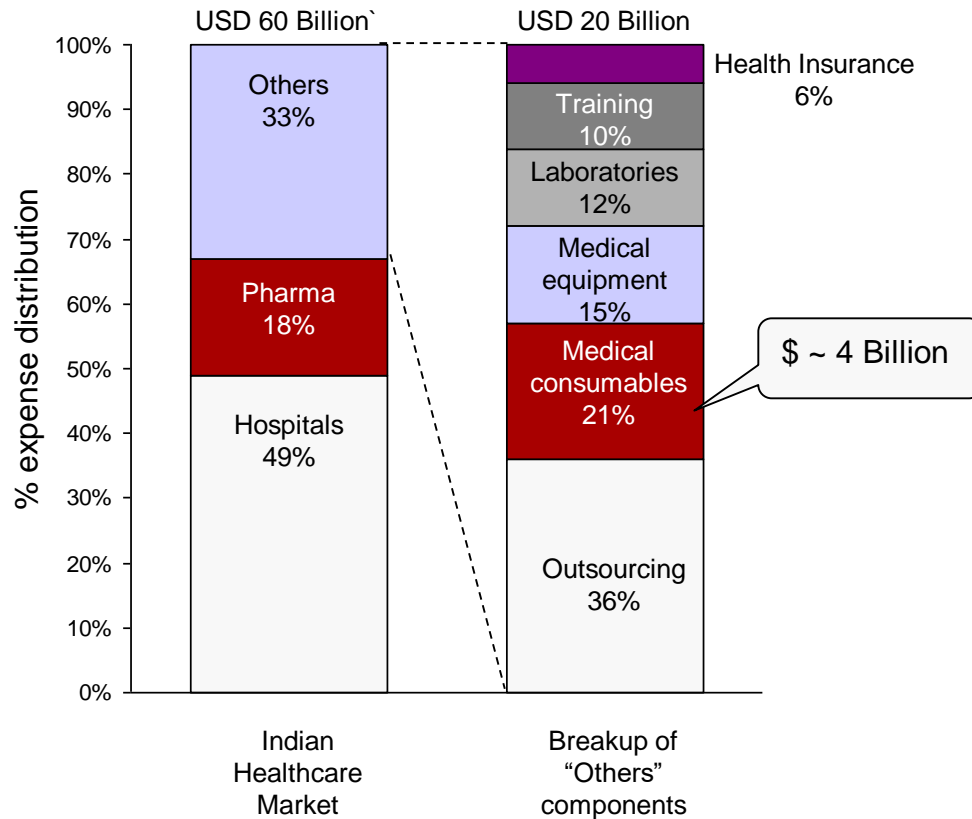
Note: The following estimation is based on secondary research , and RedSeer Analysis

Source: 1) Literature research from diabetes atlas

2)Literature research form Zee news article

Medical Consumables, with USD 4 Billion market size– is a key component of Indian Health Care Industry

Break-up of Indian Health Care Market (2010)



Discussion

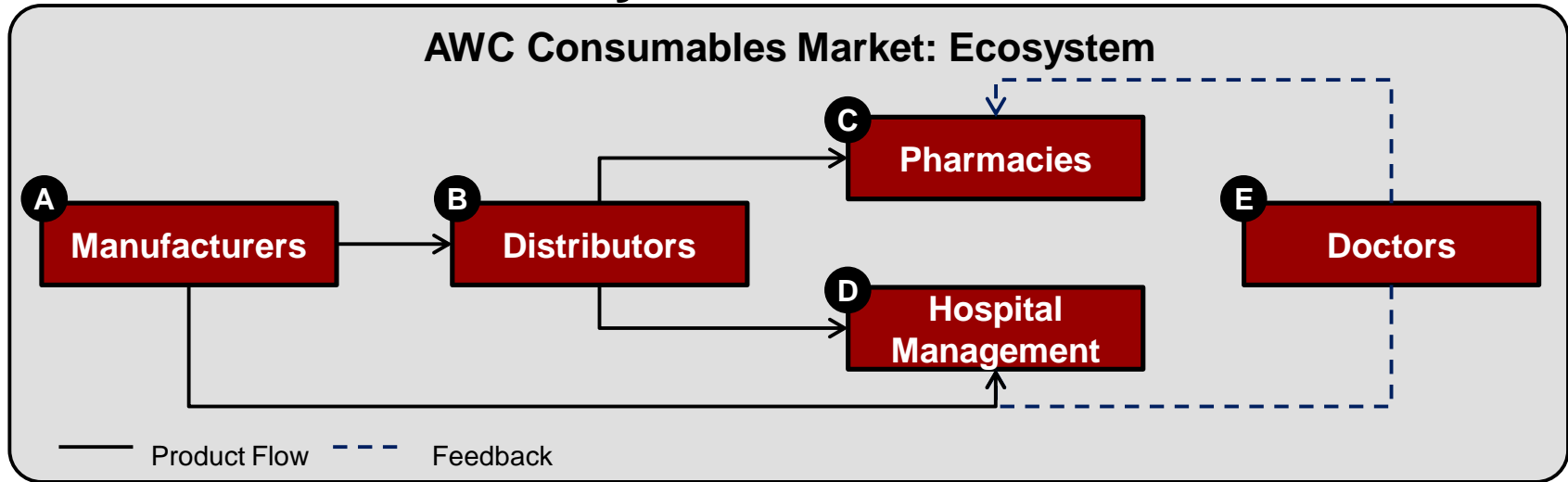
- Wound-Care segment is a significant part of Medical consumables
- Advanced wound care (AWC) is still a very small segment of Indian wound care market as TWC has a dominant share
- Growth in top-tier hospitals and health insurance is acting as enabler for AWC products usage
- Leading organized players in AWC market are : 3M, Johnson & Johnson, Smith & Nephew Beiersdorf, Coloplast, Elder-Hartman, and Dr. Reddy's

1. Other medical consumable includes surgical gloves, implant s, sutures , medicines, medical hand wash etc

2. TWC: Traditional Wound Care

Source: RedSeer Consulting Analysis; Secondary Research; IBEF Healthcare report, Oct 2007

Doctors' experience with AWC products is a major influencer in AWC ecosystem

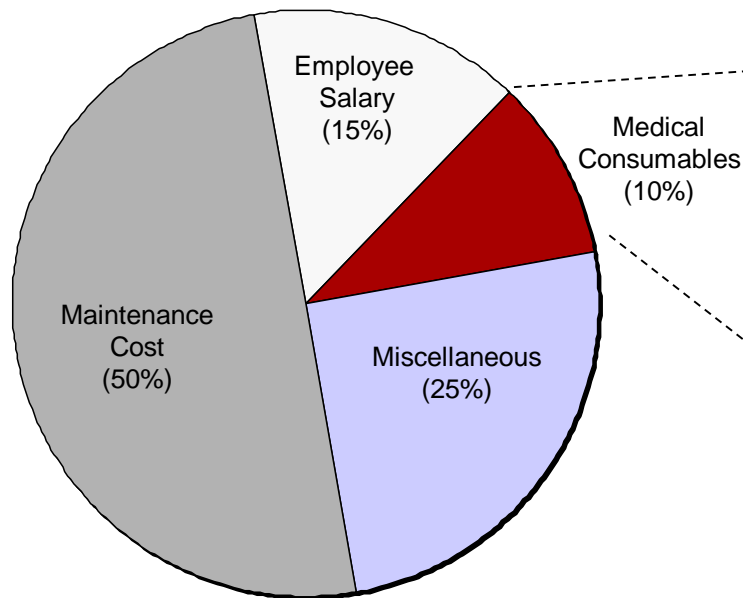


Manufacturers	Distributors	Hospital management	Doctors
<ul style="list-style-type: none"> • AWC player categories in India are 1) MNC companies with India presence, 2) MNC companies with limited/no India presence, and 3) Local Players • Local players have limited presence and product portfolio 	<ul style="list-style-type: none"> • Act as supply chain and major influencers for companies with limited India presence • Act as extended arms actively involved in marketing and distribution for MNCs with India presence • Limited relationship with retail pharmacies 	<ul style="list-style-type: none"> • Procure product available in Indian market directly from companies and form dealers in cases where the company is not having India presence. • Procurement is influenced by how often particular brand is being prescribed by the doctors 	<ul style="list-style-type: none"> • Act as major governing factor in usage of AWC products in hospital • Product prescription based on prior performance and affordability of patient • Adequate awareness restricted to doctors with international exposure

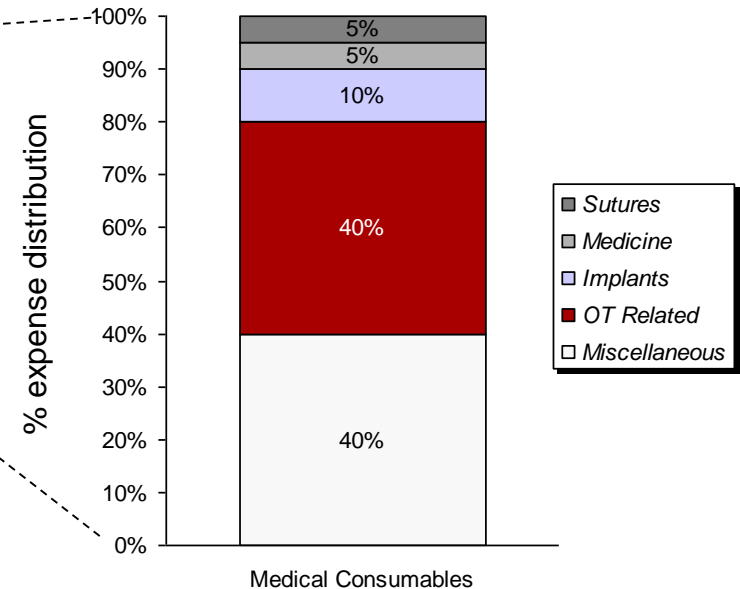
Case Study: Medical consumables, as a stand-alone segment, is a major contributor to hospital expenditure

Based on multi-specialty daycare hospital based out of Bangalore

Hospital Overall Spend



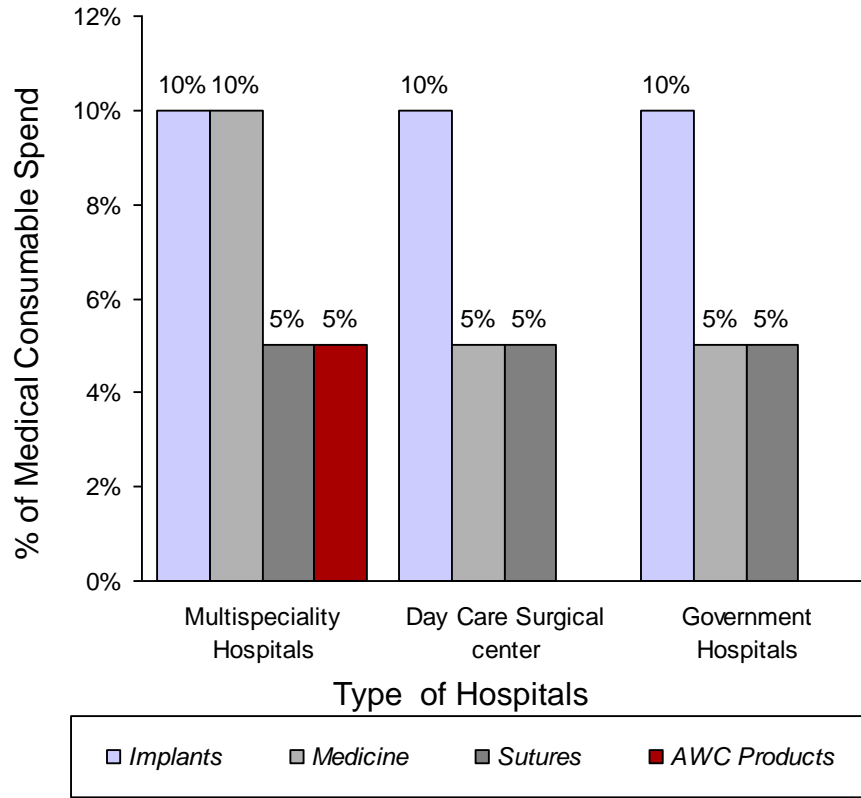
Spend on Medical consumables



- 1) Miscellaneous expense for medical consumables include traditional & advanced wound care products
- 2) The revenue distribution between advanced and traditional wound care products varies as per the hospital specialty
- 3) AWC products are fast moving and have relatively high brand stickiness compared to other medical consumables

Multispecialty hospitals are the prime consumers for AWC products

Spend segmentation of Medical Consumables



Discussion

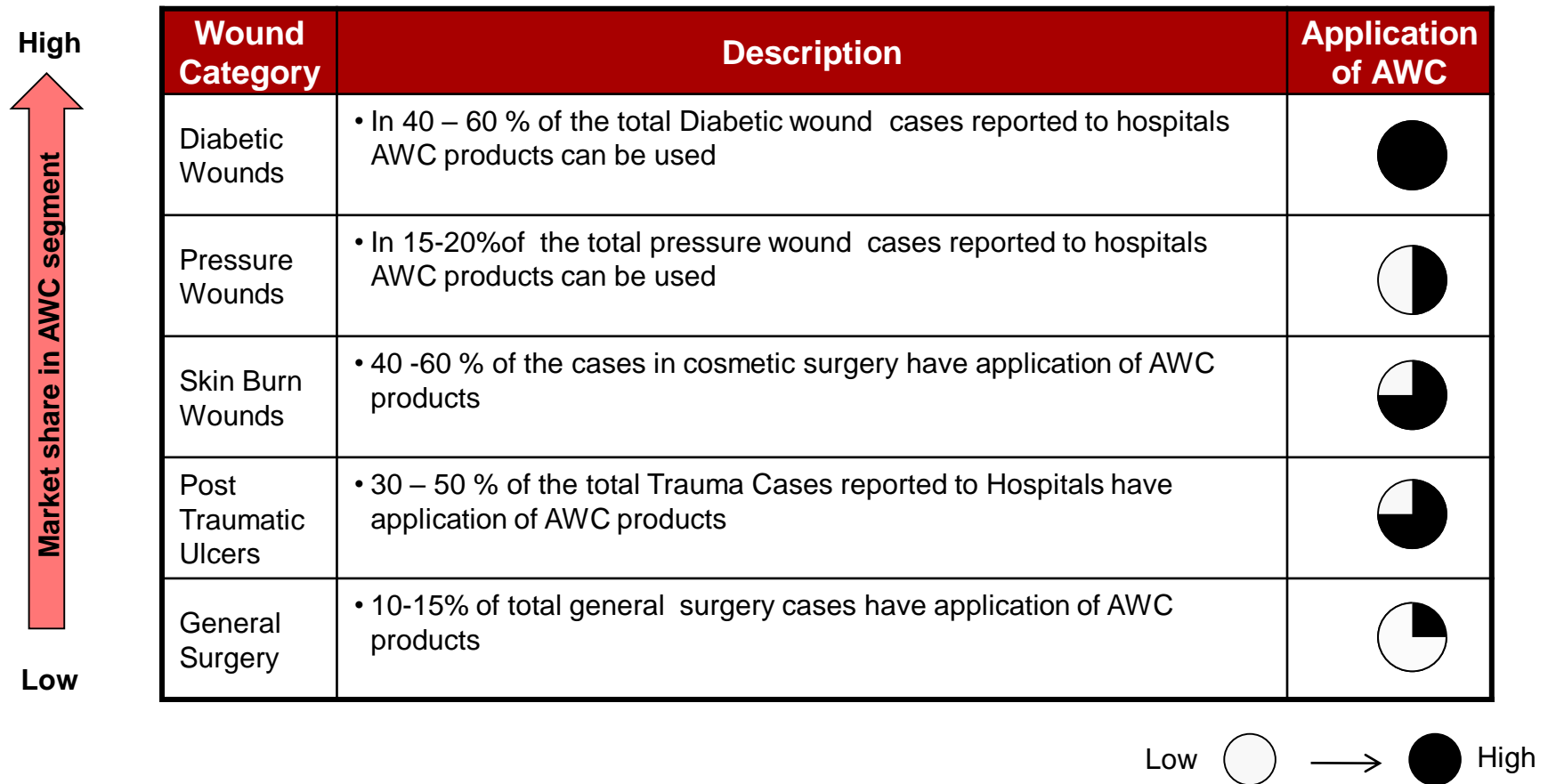
- Minimal usage of AWC in hospitals without trauma/ burn center, diabetes or other relevant specialization
- Government hospitals use traditional wound care due to high cost of AWC or incentive given by local companies to doctors
- High-end multispecialty hospitals are increasing in India which are the major consumers of AWC

Note: The following information is based on interviews between above mentioned three different hospital categories
Miscellaneous include equipment like wound cleaners, skin staplers, traditional wound care products and dressing material
Source: RedSeer Consulting Analysis

Majority of AWC consumption is concentrated in segments like Diabetic, Burn and Trauma Wound care

Preliminary and Indicative

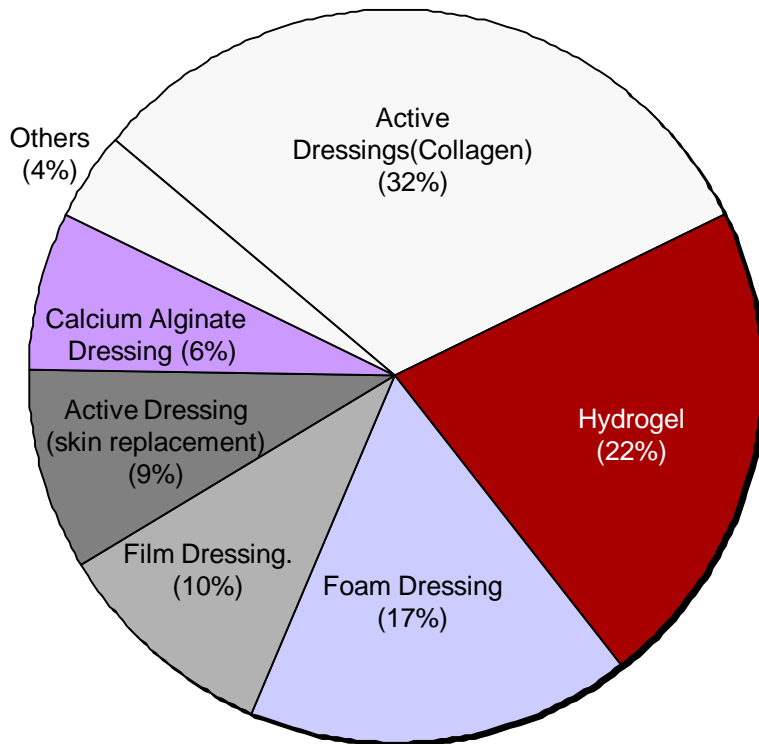
AWC Application by Wound Categories



Note: Following information is based on a sample set of specialty doctors in wound care India
 Percentage segmentation of each wound area is based on interviews of major manufacturers
 Source: RedSeer Consulting Analysis

Collagen, Hydrogels and Foam Dressings form a major chunk of market share of Indian AWC market

Indian AWC Market- By Technology
(Sample : 30 Multispecialty Hospital Pharmacies)



Discussion

Major brands stored by hospital pharmacies:

- Hydrogel – Smith & Nephew, 3M, Dr. Reddy
- Collagen – Johnson & Johnson, Dr. Reddy
- Foam Dressing – Johnson & Johnson, S & N
- Film Dressing – Johnson & Johnson
- Active Dressing (Skin replacement) – Beiserdorf and Johnson & Johnson
- Calcium Alginate Dressing – 3M

Hospitals are mostly using products from MNC brands like Johnson & Johnson, 3M and Smith & Nephew

Note: pharmacies are from 30 multispecialty hospitals which consume AWC products these include hospital chains like Apollo and Fortis

Source: RedSeer Consulting Analysis

Limited awareness amongst doctors is a major pain area in AWC Markets growth

Pain areas and growth drivers in Indian AWC market

Pain Areas

1. The prices of the AWC products are high and need to be altered as per needs of Indian market
2. Government sector hospitals have very low penetration of AWC products due to unaffordability of products and poor expertise of doctors
3. Poor awareness amongst patients and doctors resulting in preference being given to traditional wound care technologies

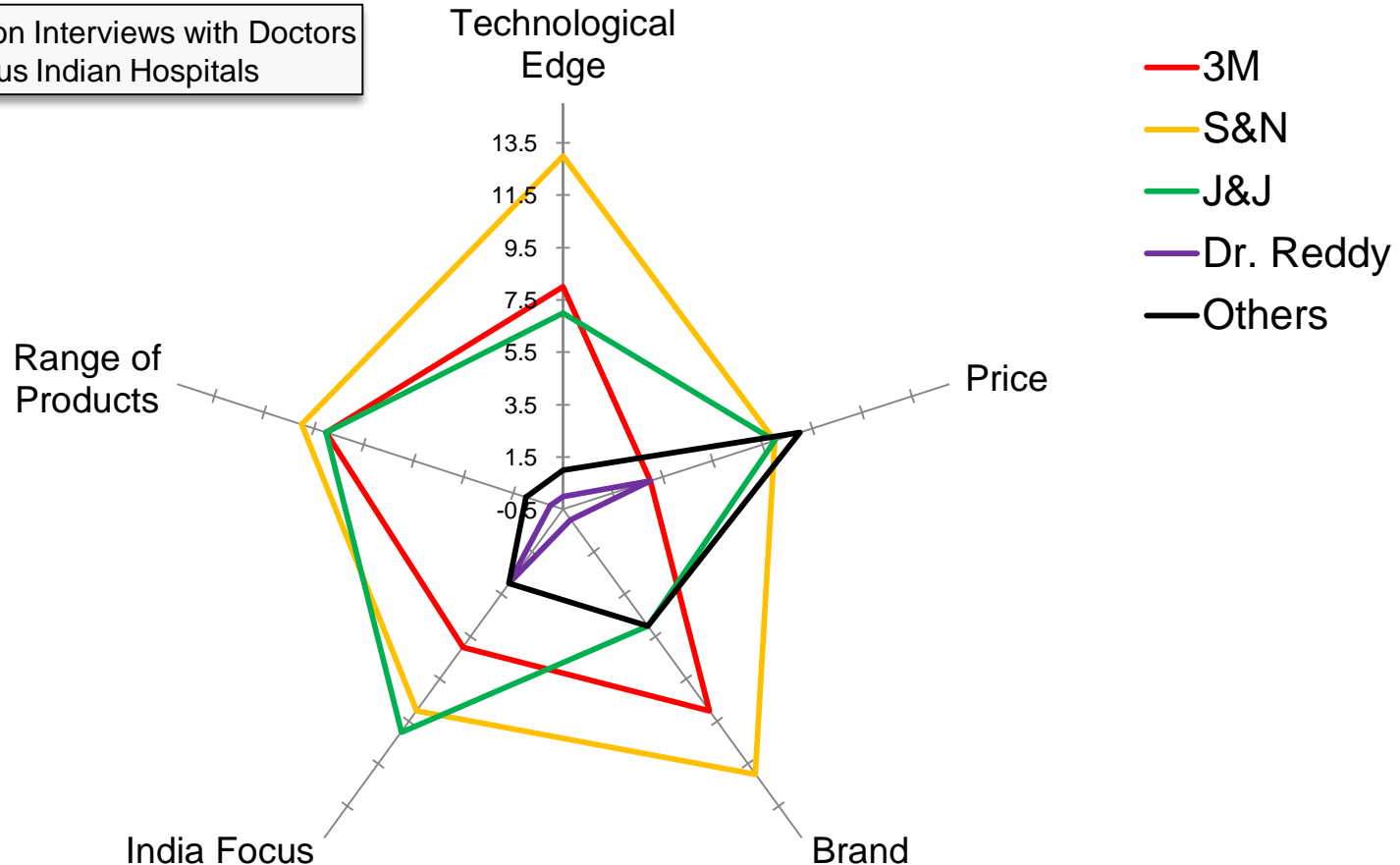
Growth Drivers

1. Increase in awareness amongst doctors about the usage and benefits of the AWC technology
2. Increase in spending by patients on healthcare
3. Increase in push from manufacturers for AWC products
4. Increase in the number of patients which require advanced wound care treatment

Smith & Nephew scores highest on – Technology, Product range and Brand...

Assessment of Major AWC Players in Indian Market

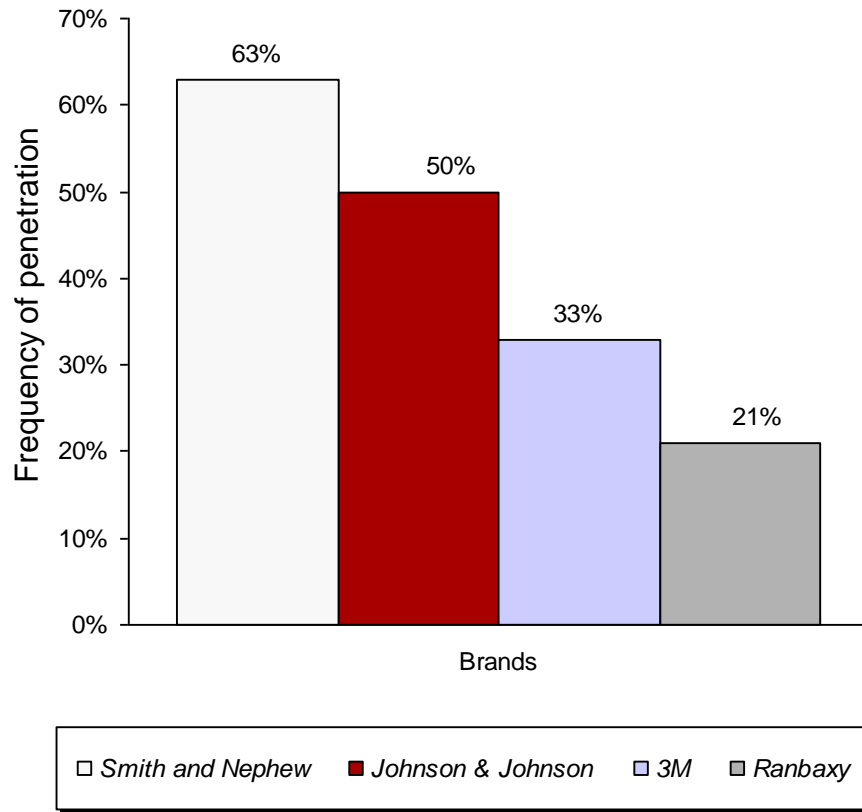
Based on Interviews with Doctors in various Indian Hospitals



- 1) Smith and Nephew's brand image has the best brand image in medical fraternity (33 doctors across trauma, orthopedic, plastic surgeon and other general surgeons)

...and also has the highest brand recall amongst doctors

Awareness of Major AWC Brands
(As mentioned by Doctors)



Product Selection Criteria

Criteria	Description
Prior Performance	<ul style="list-style-type: none">Due to limited exposure most doctors prefer brands with proven results on usage
Product Price	<ul style="list-style-type: none">The products being expensive, cost becomes a crucial factor when patient is financially constraint
Brand	<ul style="list-style-type: none">Established MNC brands are given preference
Availability	<ul style="list-style-type: none">Availability constraint effects doctors decision in prescribing products

Other Brands: Dr. Reddy's, Cipla, Encore, Micro, Lupin, Kollagen, Coloplast, CSB, Glaxo Smith, Cadila, Galderma, Fulford

Source: RedSeer Research and Analysis, primary research form a sample set of 33 doctors across specialty with AWC application

Smith and Nephew

Overview

- Advanced Wound Care Turnover : INR 15 Cr.
- Pursuing doctors and nurses to attend lectures and seminars on the usage of AWC products
- Getting tie ups with small hospitals to create a network of AWC products

Background and Business Description

Establishment	- 1856
Locations	- London, UK
Employee	- 9,764 (2009)
Areas Served	- Pan India
Key Customers	- Medical Hospital,
Key Competitors	- Johnson & Johnson and 3M

Distribution and Sourcing

- Manufacturers (overseas) → Indian Center → Regional offices → Distributors
- Major revenue contributors from AWC product portfolio involve Moist Dressing
 - Hydrogels
 - Hydrocolloids
 - Film Dressings
 - Foam Dressings
 - Calcium Alginate Dressing
- The company is mainly marketing to skin burn and infections wounds along with Diabetic wounds

Portfolio Analysis

Category	Products
Hydrogel	Y
Hydrocolloids	Y
Film dressings	Y
Foam dressings	Y
Calcium Alginate Dressings	Y
NPWT	-
Active dressings(Collagen)	-
Active dressings(Skin replacements)	-
Antimicrobial (Silver)	Y
Antimicrobial(Non-silver)	-

Johnson and Johnson

Overview

- Advanced Wound Care Turnover : ~ INR 20-22 Cr.
- Operates in India under the brand name of Ethicon for advance wound care product
- Strategy to focus on hospitals as compared to patients, the end consumer of the AWC products

Background and Business Description

- | | |
|-----------------|------------------------------------------|
| Establishment | - 1886, 50 years of existence in India |
| Locations | - HO: NJ, U.S.A , |
| Employee | - 118,700 (2009) |
| Areas Served | - Pan India |
| Key Customers | - Medical Hospitals and Pharmacies (AWC) |
| Key Competitors | - Smith & Nephew and 3M (AWC Segment) |

Distribution and Sourcing

- Manufacturers (overseas) → Indian Center → Regional offices → Distributors
- Major revenue contributors from AWC product portfolio being
 - Moist dressing (Hydrogels)
 - Moist dressing (Hydrocolloids)
- The company is mainly marketing to surgical wounds, diabetic foot ulcers segment and skin burn wounds

Portfolio Analysis

Category	Products
Hydrogel	Y
Hydrocolloids	Y
Film dressings	Y
Foam dressings	Y
Calcium Alginate Dressings	-
NPWT	-
Active dressings(Collagen)	Y
Active dressings(Skin replacements)	-
Antimicrobial (Silver)	Y
Antimicrobial(Non-silver)	-

Indian wound care market is dominated by Traditional Wound Care Segment

What are Wounds

- A Type of injury in which skin is torn, cut or punctured (an open wound), or where blunt force trauma causes a contusion (a closed wound)

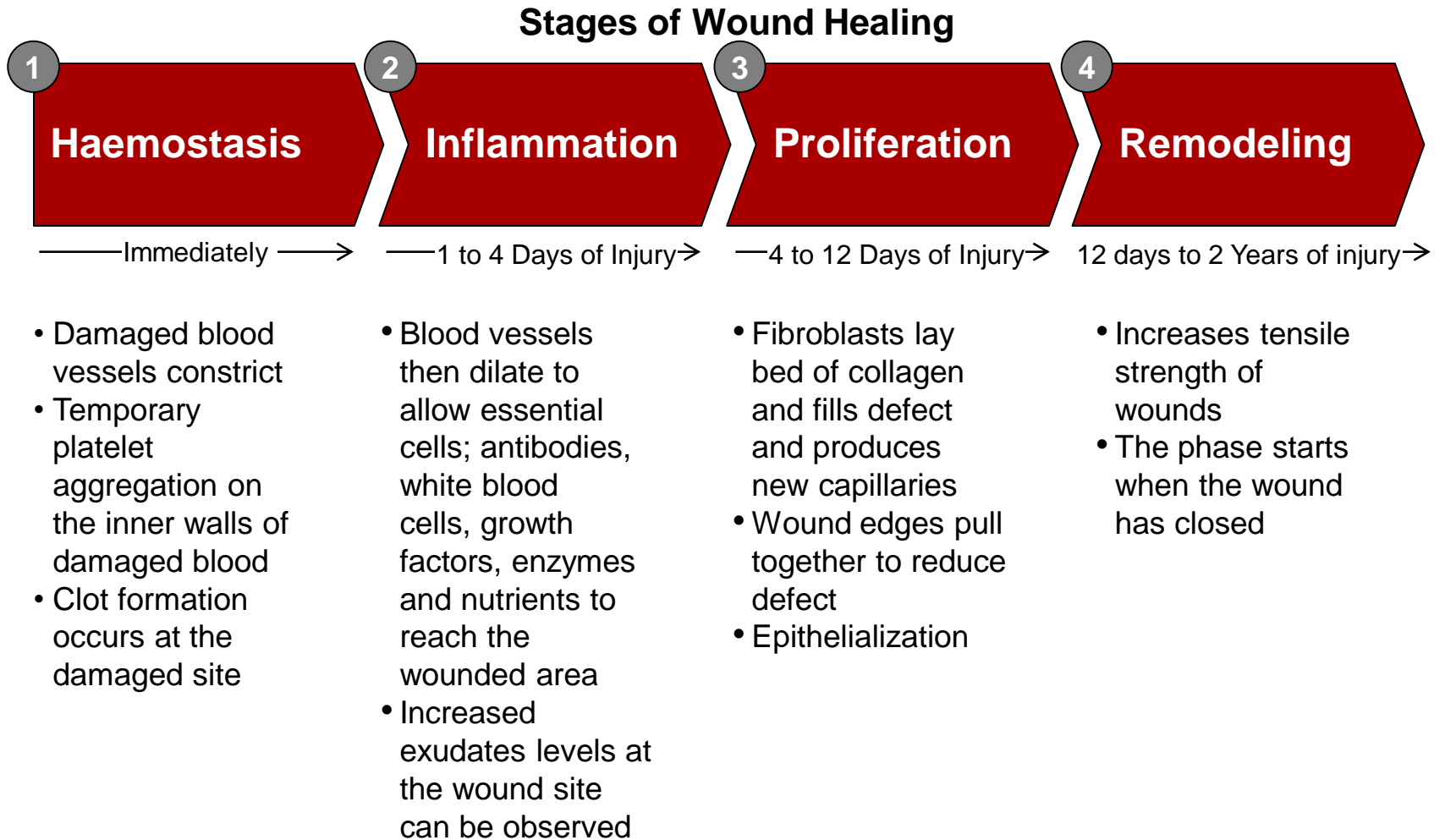
How do they Occur?

- Trauma (initial or repetitive)
- Scalds and burns both physical and chemical
- Animal bites or insect stings
- Pressure
- Vascular compromise, arterial, venous or mixed
- Immunodeficiency
- Malignancy
- Metabolic disease, including diabetes
- Nutritional deficiencies

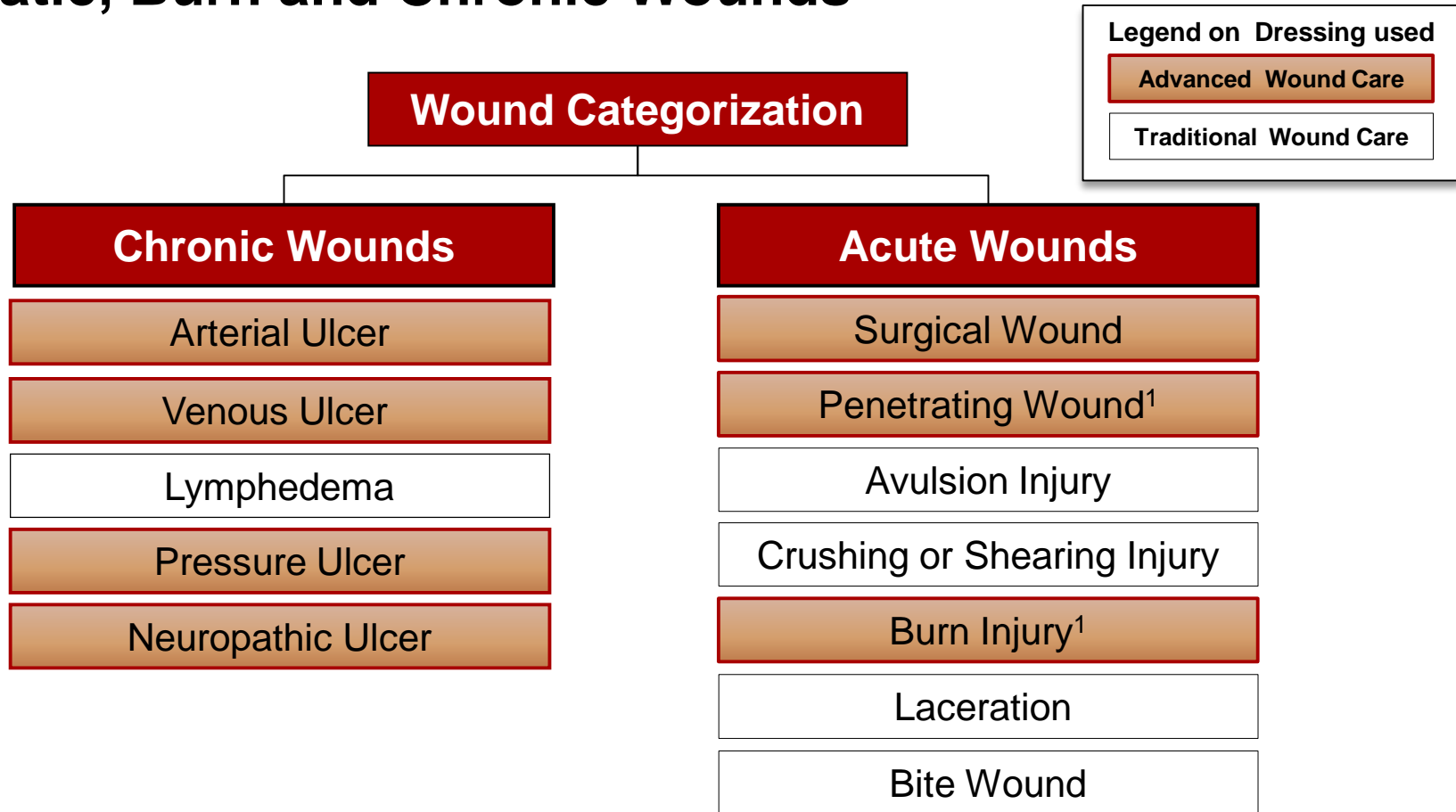
Indian Market's Take

- More than 90% of wound treatment in India involves traditional wound care
- Advanced wound care is applied only in special cases. E.g. Trauma units, Burn centers, Orthopedic, Vascular, Plastic and general surgery where aggressive wound healing is required

Wounds go through four stages of healing



AWC products have major application in Surgical, Traumatic, Burn and Chronic Wounds



- Major Indian Hospitals providing AWC treatment include Apollo, Fortis, Max, BGS Global, Escorts, Manipal, Wockhardt and other Multi-specialty centers like AIIMS, Artemis Hospital, and others. (refer to Appendix for detailed list)

Note: 1 Only the tertiary burn wounds or deep cut traumatic wounds have AWC application

Source: Wikipedia and fnotebook.com

Impaired healing leads to chronic wounds which in turn need Advanced Wound Care

Need for AWC – Comes from Impaired Healing

1. **Diabetes mellitus** causes prolonged inflammation phase which delays healing process
2. **Pressure wounds** contain necrotic tissues which compromise their wound healing process
3. **Venous ulcers** do not heal because of inadequate of blood supply in the wound area
4. **Extensive skin burns** or **Traumatic wounds** that need to be treated with aggressive wound healing
5. **Surgical wound** that need to be prevented from post operative infection which delays or stagnates the healing process



Impaired Wounds



Need for AWC

Wounds with AWC application..

Wound cause and characteristics

	Diabetic Wound	Skin Burn	Venous Stasis Ulcer	Pressure Wound	Traumatic Wound
Causes	<ul style="list-style-type: none"> Poor blood supply leads to cell necrosis and ulcer formation Loss of sensation in foot can cause an unnoticed cut or trauma to develop into ulcer 	<ul style="list-style-type: none"> Burns can be usually thermal, chemical, electric or scald burns Contact burns results from direct contact with hot objects 	<ul style="list-style-type: none"> Due to improper functioning of venous valves Occur mostly in lower extremity of legs 	<ul style="list-style-type: none"> Inadequate blood supply resulting reperfusion injury when blood re-enters tissue Ischemia occurs to tissue when pressure is applied to one area for a prolonged time 	<ul style="list-style-type: none"> Trauma is a body altering injury for example car accident or a fall injuries Mechanical trauma as well as chemical, electrical, or thermal insults, may result in ulceration.
Characteristics	<ul style="list-style-type: none"> Usually occurs at the bottom of the foot There may also be a rash, redness, brown discoloration or dry, scaly skin. 	<ul style="list-style-type: none"> 1st and 2nd degree burns may heal spontaneously after minimum treatment 3rd degree burn is a burn through the entire skin and will usually require surgical intervention and advanced wound care for healing. 	<ul style="list-style-type: none"> Venous ulcers (stasis ulcer or varicose ulcers) are caused due to improper functioning of venous valves Venous ulcers mostly occur in lower extremity of legs 	<ul style="list-style-type: none"> Upper layers of skin begin to die Sore broken through the skin extending down to deeper layers of skin tissue Sore extends past the skin and into fat, muscle and bone tissue Blackened dead tissue called Escher may be seen in deep opened wound 	<ul style="list-style-type: none"> Can be classified as blunt or penetrating trauma Trauma may lead to damage to arterial, venous or lymphatic systems Trauma may damage the bone architecture or result in loss of tissue layers.

...Commonly treated using Collagens, Hydrogels and Hydrocolloids by Indian Doctors




Treatment approach in Wound Categories, India

	Diabetic Wound	Skin Burn	Venous Stasis Ulcer	Pressure Wound	Traumatic Wound
Treatment Approach	<ul style="list-style-type: none"> Control of sugar level and antibiotic prescription to avoid infection Surgical Removal of dead tissue, puss to maintain hygiene 	<ul style="list-style-type: none"> For 3rd degree skin burns mainly skin replacement or skin grafting methods are applied which may be followed by AWC dressing 	<ul style="list-style-type: none"> Compression therapy is used on venous leg ulcers to prevent venous reflux Surgical approach involves removal of dead and worn out tissues from the wound 	<ul style="list-style-type: none"> For Superficial wounds , treatment is done using hydrocolloid / film dressings Deeper wounds require surgical treatment 	<ul style="list-style-type: none"> Traditional wound care treatment is deployed in most of the traumatic wound cases
AWC Application	<ul style="list-style-type: none"> AWC acts as secondary line of treatment once the wound has been treated surgically Collagen, Foam dressing and Hydrogel are the major technologies being used 	<ul style="list-style-type: none"> Collagen is applied on the burn site which combines with the connective tissue and helps in skin regeneration. It is also used at donor site In case of oozing wounds hydrocolloids or foam dressings are also used 	<ul style="list-style-type: none"> Collagen is used after surgical removal of dead and worn out tissues from the wound to regenerate skin Hydrogels or Hydrocolloids are used as moist dressing in superficial ulcers. 	<ul style="list-style-type: none"> Created wound cavities are filled using calcium alginate Hydrogel and Hydrocolloid are used on superficial pressure wounds once the wound has been disinfected In case of deep wound , collagen is being used 	<ul style="list-style-type: none"> Collagens are used in situations of deep cut open wound or de-gloving injury

Indian Scenario of AWC Technologies usage

Wound category vs. AWC technology matrix

	Hydrogel	Hydrocolloid	Foam Dressing	Film Dressing	Collagen	Calcium Alginate
Diabetic Foot Ulcer	High	High	Medium	Medium	Medium	Medium
Venous Ulcers	High	High	Low	Low	High	Low
Pressure Wounds	Low	High	Low	High	Medium	High
Traumatic Ulcers	Medium	Low	Low	High	High	High
Skin Burns	High	High	High	Low	High	Low

-  Widely used by Indian doctors in the treatment of that particular technology
-  Significantly used by Indian doctors in the treatment of that particular technology
-  Occasionally used by Indian doctors in the treatment of that particular technology

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