<u>Diabetic Foot Ulcers</u>: Prevalence, Current Therapies, Challenges & Future Perspectives.

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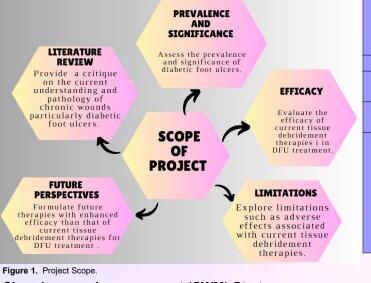
Table 1. Literature Search Fligibility Criteria

Methodology:

Introduction :

Project relevance :

Diabetic foot ulcers (DFUs) develop in about 25% of diabetics. 5% face amputation within 12 months and 78% within 30 days. Half of amputated patients die in a year and 80% within 5 years. Estimated annual cost of DFUs is up to \$US13 billion.



Chronic wound management (CWM) Strategy:

	Inclusion Criteria :	Exclusion Criteria:							
ublication dates	2018-2023	-							
Selection	Case Studies	Bibliographic Review							
Criteria	Open label Study	Systematic Review							
	Open Randomized Control Trials								
Subjects	Diabetic foot ulcer patients	Animals							
Wound type	Diabetic foot ulcers	Vascular and Pressure ulcers							
Maggot Strain	Lucilia sericata	Lucilia cuprina							
CWM	Tissue debridement:	Infection control							
strategy	Maggot Debridement therapy	Moisture balance							
	(MDT)	Excision of wound edges							
	Negative Pressure Wound Therapy (NPWT)								
	Ultrasound Assisted Wound Therapy (UAWT)								

Discussion and conclusion:

	GOLD STANDARD	ALTERNATIVES	OUTCOME ANALYSIS			
2	Tissue debridement particularly surgical debridement (SD) is regarded as the gold standard. However surgical debridement is not necessarily suitable for every DFU.	Alternatives to SD namely MDT, UAWT AND NPWT were analysed across 8 studies. Efficacy of selected therapies evaluated, and five similar outcomes	MDT, UAWT and NPWT found to be efficacious alternatives SD. However, advanced therapies with minimal adverse effects and an enhanced efficacy are needed			
	Enhanced efficacy	compared.				
es	and no adverse effects have been recorded in ATMP clinical trials. Availability of these costly future therapies requires planning in advance.	TISSUE EASED THERAPIES ADVANCED THERAPY MEDICINAL PRODUCTS (ATMPS) MESENCHYMAL STEM CELL THERAPY				
	in auvance.	Figure 2 Detential ATMD therearise for DEUs				

Result Analysis:

Table 2. Efficacy analysis of MDT, UAWT and NPWT in DFU treatment.

Figure 3. Potential ATMP therapies for DFUs.

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		Removal of necrotic tissue, biofilm , damaged ECM	Outcome	CURRENT TISSUE DEBRIDEMENT THERAPY			
T	HICCHL	components, and cellular debri Examples : Surgical Debrideme			MDT	UAWT	NPWT
	DEBRIDEMENT Therapy (MDT), Ultrasound Assisted Wound Therapy (UAWT), Negative Pressure Wound Therapy (NPWT).			Wound healing	Between 3 - 12 weeks.	Between 6 - 14 weeks.	Outcome was not analysed.
				time			
	INFECTION	Prevention of microbia	al growth using	Changes in wound	-Wound size reduced in MDT	- Mean wound size reduced in UAWT	-Mean wound size reduced
	CONTROL	antimicrobial washes and top	ical antimicrobials.	size (cm2)	treated DFUs when	treated patients when compared to	after NPWT compared to
					compared to untreated	untreated DFU patients.	before treatment.
	MOISTURE	Use of moisture retaining dressings like		wounds.			
	BALANCE	hydrogels and alginates as a way to accelerate healing.		Polymicrobial load	Outcome was not analysed.	Polymicrobial cultures decreased in	Polymicrobial load significantly
				(%)		UAWT treated DFUs compared to	decreased on NPWT treated
	EXCISION OF	Excision of undermined v	wound edges to allow			untreated DFUs.	compared to untreated
E /	WOUND EDGES	for reepithelization.					wounds.
Figure 2. T.I.M.E Principle Chronic Wound Management Principle.				Granulation tissue	Granulation tissue formed.	Outcome was not analysed.	Granulation tissue formed.
References		Acknowledgements Dr Elizabeth Caroll	- Evelyn Gwenje	(cm2)		,	
2. Ellis, Lin and Tartar, 2018 - Dr Macdara Bodeker - Stephen Chiweshe		Adverse effects	Pain, chilling, failure to heal	Pain, cellulitis and increased wound	Recurrence and death		
		- Munyaradzi Maguwe - Friends and Family	(limitations)	leading to foot amputation.	exudate .	recorded within one year.	