Review Article

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An Audit of Pressure Ulcer in Tertiary Care Hospital

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1. Abstract

1.1. Introduction
The pressure ulcers are a serious problem in any hospital setting. The main aim of audits is to assess the magnitude of problem and reduce the number of severity of pressure ulcers.

1.2. Material & Methods
The audit was conducted to examine whether monitoring for pressure ulcer has been done meticulously and its overall impact on patient care/ outcome. The audit was performed on in house admitted patients for three consecutive years. A systematic random sampling was done where we took last three months of both years 2019 and 2020 for audit. In order to assess 2021 year we took initial 3 month period i.e Jan – March, 2021. The assessment sheet including various checklists duly filled by the nursing team was in a questionnaire format.A total of 252 patients over three year period were included in the study. All in house patients' irrespective of age or sex with pressure damage either at the time of admission or later subsequently during their stay in the hospital.

1.3. Results
Nearly fifty percent of the patients had pressure sore at the time of admission; the incidence was more or less same for three years studied. The most common site of involvement was buttocks (bilateral or single) followed by sacrum and later multiple sites. The most common Braden score group was between score 10 to score 14 for the years 2019 & 2020 whereas for the year 2021 score 11 & 12 were the most common ones. The most common PUSH score in 2019 was score 9 with 6.93% individuals, in 2020 it was score 10 with 9.17% and for 2021 it was score 7 with 7.14% patients. Grade 2 pressure ulcer were the most commonly graded pressure injury in all three years (53.46 % in 2019, 57.79%in 2020 and 54.76% in 2021 year) .Incontinence associated dermatitis (IAD) and Medical device related skin injuries (MARSI) were also noted with incidence of 17.82%(18/101), 16.51%(18/109) and 19.05% (8/42) in three consecutive years. The risk assessment was done by the help of questionnaire showed complete documentation with respect to ulcer risk, skin assessment, individualized care plan, pressure redistribution device use and nutritional assessment. The nutritional and hydration assessment was carried out for majority of patients with application of topical agents in (95.04% in 2019, 96.33% in 2020 & 80.95% in 2021) . Most of the patients were repositioned every 24 hours 92.07% in 2019, 94.49% in 2020 & 95.24% in 2021, pressure reducing equipment like mattress was used in approximately 93 to 97 % of patients over three year period and in 66.33 % to 80.95% it was checked that devices are properly fitted or not. The skin cushioning in high risk areas was satisfactory as it was done in42.57% in 2019, 58.71% in 2020 & 64.28% in 20121 of the patients.

1.4. Conclusion
In the reassessment of patients for pressure injury development of new areas of redness or improperly fitted medical device incidence shows improvement.The nutritional assessment shows that the special diet recommendations by the dietician needs attention in near future. The strategies for minimizing friction including the use of skin cushion in high risk areas has improved from previous years along with reference to skin specialist for better management of pressure injuries in patients.

2. Keywords:
Pressure ulcer, Internal audit, Quality health services

3. Introduction

The pressure ulcers are a serious problem in any hospital setting. The main aim of audits is to assess the magnitude of problem and reduce the number of severity of pressure ulcers. Pressure ulcer has a negative impact on physical, social and financial aspects of people's lives. [1] The prevalence of pressure ulcers are one of the key quality indicators for health care providers. Every health care provider aims at reducing the incidence of pressure ulcers in their health care setting. It is well established in literature studies that continuous monitoring and feedback of performance data to hospitals influence actual care provision to patients. [2, 3] The hospital been a tertiary care hospital with accreditation for NABH has implemented pressure sore /ulcer vigilance since 2017. The audit aims to examine whether monitoring for pressure ulcer has been done meticulously and its overall impact on patient care/ outcome. The audit was performed on in house admitted patients for three consecutive years. A systematic random sampling was done where we took last three months of both years 2019 and 2020 for audit. In order to assess 2021 year we took initial 3 month period i.e Jan – March, 2021.

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4. Material & Methods

The audit was carried for three consecutive years involving systematic data collection to assess the monitoring of pressure ulcer cases in various health care settings (wards, ICUs). The training coordinator, a specialized nurse was responsible for data collection; the coordinator selected a team of nurses to perform assessments within the entire institute. The assessment sheet including various checklists duly filled by the nursing team was in a questionnaire format. In order to ensure reliability in data collection and eliminating observer bias, each group was examined by two nurses, one from the patient's own ward/ ICU and another one who was unfamiliar with the patient. [4] The parameter assessed is shown in table -1.

Table 1: Parameters assessed for pressure ulcer

▯	Circulatory Disorder	▯	Device
▯	Immobility	▯	Tissue Tolerance
▯	Sensory Loss	▯	Shear
▯	Changes in Mental Status	▯	Friction
▯	Incontinence	▯	Moisture
▯	Comorbidities	▯	Body Weight
▯	Poor Nutrition	▯	Disease condition
▯	Age	▯	medication

4.1. Sample

A total of 252 patients over three year period were included in the study. The other set criteria for participation in study are as under.

4.1.1. Inclusion criteria

All in house patients' irrespective of age or sex with pressure damage either at the time of admission or later subsequently during their stay in the hospital.

4.1.2. Exclusion criteria

Patient with suspected deep tissue injuries as any improvement would be difficult to measure.

5. Results

A total of 252 patients were included in study comprising of 1010 for the year 2019, 109 for the year 2020 and 42 for the year 2021. The males were higher in number than female patients. (Table-2)

Table 2: Male to Female ratio in patients for three consecutive years

	2019	2020	2021
Male	69 (68.31%)	75 (68.81%)	24(58.54%)
Female	32 (31.69%)	34 (31.19%)	17(41.46%)
M:F Ratio	2.12:1	2.21:1	1.41:1

Nearly fifty percent of the patients had pressure sore at the time of admission; the incidence was more or less same for three years studied. (Table-3)

Table 3: Condition at the time of admission

	2019	2020	2021
Pressure sore at admission	56 (55.46%)	71(65.12%)	28 (66.67%)
No pressure sore at admission	45 (44.54%)	38 (34.88%)	14 (33.33%)

The most common site of involvement was buttocks (bilateral or single) followed by sacrum and later multiple sites, the distribution of various sites are illustrated in table – 4.

Table 4: Site wise distributions of pressure sores

	2019	Percentage (%)	2020	Percentage (%)	2021	Percentage (%)
Abdomen	1	0.99	0	0.00	0	0.00
Back	2	1.98	4	3.67	2	4.76
Forehead	0	0.00	0	0.00	1	2.38
Heel	0	0.00	0	0.00	3	7.14
Buttocks	28	27.72	50	45.87	22	52.38
Buttocks single	14	13.86	0	0.00	0	0.00
Cheek	1	0.99	0	0.00	0	0.00
Chest	1	0.99	0	0.00	0	0.00
Coccyx	3	2.97	3	2.75	1	2.38
Knee	0	0.00	1	0.92	0	0.00
Ear lobe	3	2.97	0	0.00	0	0.00
Ear	1	0.99	0	0.00	0	0.00
Hands	1	0.99	0	0.00	1	2.38
Hip	1	0.99	0	0.00	0	0.00
Foot	1	0.99	0	0.00	0	0.00
Scapula	2	1.98	0	0.00	0	0.00
Lip	1	0.99	0	0.00	0	0.00
Trochnter	1	0.99	0	0.00	0	0.00
Ankle	0	0.00	1	0.92	0	0.00
Multiple	6	5.94	16	14.68	0	0.00
Occipetal	1	0.99	2	1.83	0	0.00
Perineal area	2	1.98	1	0.92	3	7.14
Rectal area	1	0.99	0	0.00	0	0.00
Wrist	1	0.99	1	0.92	0	0.00
Iliac crest	1	0.99	0	0.00	0	0.00
Trunk	0	0.00	2	1.83	0	0.00
Sacrum	22	21.78	16	14.68	4	9.52

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Thigh	0	0.00	8	7.34	3	7.14
Scotum	2	1.98	1	0.92	0	0.00
Nose	0	0.00	3	2.75	2	4.76
Shoulder	1	0.99	0	0.00	0	0.00
Trunk	3	2.97	0	0.00	0	0.00
	101		109		42	

The nursing staffs exercises their nursing judgement in defining risk for patients with pressure tissue injury as Braden score. Table-5 shows Braden score of patients over three years. The most common score group was between score 10 to score 14 for the years 2019 & 2020 whereas for the year 2021 score 11 & 12 were the most common ones. In 2019, 16.84% had score 10, 15.84 % had score 12, and 14.85% had score 14. Scores less than or equal to 18 mandates reassessment after 48 hours which was done in all cases with Braden scores less than 18. In the year 2020 top three scores were , 13, 14 and 10, 11 & 13 with 17.43%, 11% and 10.09 % patients .Similarly in 2021, 14.28% had score 11 or 12 and 9.52 % had score 13 or 16.

Table 5: Braden score of patients

Braden score	2019	2020	2021
6	2 (1.9%)	3 (2.75%)	0
8	6(5.94%)	4 (3.66%)	1 (2.38%)
9	9 (8.91%)	3(2.75%)	4 (9.52%)
10	17 (16.83%)	11(10.09%)	2 (4.76%)
11	12 (11.88%)	11(10.09%)	6(14.28%)
12	16(15.84%)	9(8.25%)	6(14.28%)
13	10(9.90%)	19(17.43%)	4 (9.52%)
14	15(14.85%)	12(11%)	2(4.76%)
15	4(3.96%)	2(1.83%)	3 (7.14%)
16	3(2.97%)	8(7.33%)	4 (9.52%)
17	4(3.96%)	11(10.09%)	3(7.14%)
18	1(0.99%)	7(6.42%)	3(7.14%)
21	1(0.99%)	1(0.91%)	1(2.38%)
22	0	4(3.66%)	1(2.38%)
23	0	1(0.91%)	2 (4.76%)
24	0	1(0.91%)	0
25	0	2 (1.83%)	0
Total patients	101	109	42

The National pressure injury advisory panel (NPIAP) suggested pressure ulcer scale for healing, table- 6 shows 'Push Score' for patients. The PUSH Tool monitors three parameters: surface area of the wound, wound exudate and type of wound tissue. Wounds are measured using a centimetre ruler. The scores are rated from 0 to 10 according to the size of the wound. The total score rages from 0 to 17.

There was significant number of patients each year where PUSH score could not be assessed (29.7% in year 2019, 31.1% in the year 2020 and 35.71% in the year 2021).The most common score in 2019 was score 9 with 6.93% individuals , in 2020 it was score 10 with 9.17% and for 2021 it was score 7 with 7.14% patients.

Table 6: Push score of patients

Push score	2019	2020	2021
1	2(1.98%)	0	1(2.38%)
3	7(6.93%)	6(5.5%)	3 (7.14%)
4	5(4.95%)	3(2.75%)	2(4.76%)
5	8(7.92%)	1(0.99%)	1(2.38%0
6	9(8.91%)	9(8.25%)	3(7.14%)
7	6(5.94%)	6(5.5%)	5(11.9%)
8	4(3.36%)	10(9.17%)	1(2.38%)
9	7(6.93%)	7(6.42%0	3(7.14%)
10	5(4.95%)	10(9.17%)	3(7.14%)
11	2(1.98%)	6(5.5%)	2(4.76%)
12	3(2.97%)	8(7.3%)	3(7.14%)
13	2(1.98%)	2(1.83%)	0
14	3(2.97%)	3(2.75%)	0
15	3(2.97%)	3(2.75%)	0
16	3(2.97%)	1(0.99%)	0
17	2(1.98%)	0	0
No score	30(29.70%)	34 (31.1%)	15 (35.11%)
	101	109	42

Table-7 , shows grade score of pressure injury. Grade 2 pressure ulcer were the most commonly graded pressure injury in all three years (53.46 % in 2019, 57.79%in 2020 and 54.76% in 2021 year). Incontinence associated dermatitis (IAD) and Medical device related skin injuries (MARSI) were also noted with incidence of 17.82%(18/101), 16.51%(18/109) and 19.05% (8/42) in three consecutive years.

Table 7: Grade of patients for three consecutive years

Year	2019	2020	2021
Device related	4(3.96%)	5(4.58%)	5(11.9%)
IAD	18(17.82%)	18(16.55)	8(19.04%)
MARSI	2(1.98%)	6(5.50%)	0
PU 1	8(7.92%)	8(7.33%)	5(11.90%)
PU 2	54953.46%)	63(57.79%)	23(54.76%)
PU 3	12(11.88%)	6(5.5%)	0
PU 4	2(1.98%)	1(0.91%)	0
Un stage bale	1(0.99%)	2(1.83%)	1(2.38%)
TOTAL	101	109	42

The risk assessment was done by the help of questionnaire showed

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complete documentation with respect to ulcer risk, skin assessment, individualized care plan, pressure redistribution device use and nutritional assessment. (Table-8) The patients were additionally assessed for other co morbid conditions like circulatory disorders, immobility, sensory loss, mental status, incontinenece, poor nutrition, age, device used, friction, moisture, body weight, tissue tolerance and medication.

Table 8: Risk assessment

Was the patient assessed for pressure ulcer risk?			
	2019	2020	2021
Yes	101 (100%)	109(100%)	42(100%)
No	0	0	0
If the patient was assessed as being at high risk, was a skin assessment offered?			
	2019	2020	2021
Yes	101(100%)	106(97.24%)	41(97.62%)
No	0	3(2.75%)	1(2.38%)
If the patient was at high risk, did they have an individualized care plan?			
	2019	2020	2021
Yes	91 (90.09%)	106 (97.24%)	41 (97.6%)
No	10(9.90%)	3(2.75%)	1 (2.38%)
If the patient was at risk, was the pressure redistribution device in place within 24 hours of risk identification?			
	2019	2020	2021
Yes	95 (94.6%)	106(97.24%)	41(97.61%)
No	6(5.4%)	3(2.75%)	1(2.38%)
Was the nutritional assessment completed within 24 hours of risk identification?			
	2019	2020	2021
Yes	96 (95.04%)	106 (97.24%)	41 (97.61%)
No	5 (4.95%)	2 (1.83%)	0
No response	0	1 (0.91%)	1 (2.38%)

(Table-9) The majority of patients had 3 to 8 risk factors as shown in table -9.

Table 9: Risk factors

Risk factors	**2019**	**2020**	**2021**
1	1	2	
2	5	9	3
3	18	25	8
4	14	29	7
5	17	20	11
6	18	15	8
7	14	4	5
8	10	3	0
9	2	1	0
10	1	1	0
11	1	0	0

Table -10 shows reassessment of patients for risk of pressure ulcers, Braden score new area of redness or improperly fitted medical device. Nearly all patients were reassessed as per documentation. There were 16.83% patients in 2019, 34.86% in 2020 and 47.61% in 2021 who had new area of redness or reported ill fit medical device.

Table 10: Re assessment of patients

If there was a change in clinical status, was pressure ulcer risk reassessed?			
	2019	**2020**	**2021**
Yes	100(99%)	100(91.74%)	39 (92.85%)
No	1(0.99%)	1(0.91%)	3(7.14%)
No response	0	8(7.33%)	0
Was the patient with identified risk factor is reassessed shift wise?			
	2019	**2020**	**2021**
Yes	101(100%)	108(99.08%)	42(100%)
No	0	1(0.91%)	0
Was the Braden score correctly calculated during reassessment?			
	2019	**2020**	**2021**
Yes	98 (97.02%)	108(99.08%)	41(97.61%)
No	3(2.97%)	1(0.91%)	1(2.38%)
Was there any new area of redness or improperly fitted medical device.			
	2019	**2020**	**2021**
Yes	17 (16.83%)	38 (34.86%)	20 (47.61%)
No	81 (80.19%)	66 (60.55%)	17 (40.47%)
No response	3 (2.97%)	5 (4.58%)	5 (11.90%)

The nutritional and hydration assessment was carried out for majority of patients with application of topical agents in (95.04% in 2019, 96.33% in 2020 & 80.95% in 2021) (Table-11), however as evident special diet recommendation by dietician within 24 hours of risk identification were not done satisfactorily as 32% in 2019, 15% in 2020 & 7% in 2021 patients didn't get diet modified subsequent to dietician assessment in the year 2019, 2020 and 2021 respectively.

Table 11: Nutritional and hydration assessment

Was topical agents used to hydrate the skin			
	2019	**2020**	**2021**

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Yes	96 (95.045)	105 (96.33%)	34 (80.95%)
No	4 (3.96%)	3 (2.75%)	8 (19.04%)
No response	1 (0.99%)	1(0.91%)	0
Was the special diet recommended by dietician ordered within 24 hours of risk identification?			
Yes	58 (57.42%)	64 (58.71%)	27 (64.28%)
No	33 (32.67%)	17 (15.59%)	3 (7.14%)
No response	10 (9.90%)	28 (25.63%)	12 (28.57%)

Table 12 shows strategies for minimizing friction. Most of the patients were repositioned every 24 hours 92.07% in 2019, 94.49% in 2020 & 95.24% in 2021, pressure reducing equipment like mattress was used in approximately 93 to 97 % of patients over three year period and in 66.33 % to 80.95% it was checked that devices are properly fitted or not.

Table 12: Strategies for minimizing friction

Was the patient repositioned or turned at least every two hours?			
	2019	**2020**	**2021**
Yes	93 (92.07%)	103 (94.49%)	40(95.24%)
No	5 (4.95%)	3 (2.75%)	2 (4.76%)
No response	3 (2.97%)	3 (2.75%)	0
Was pressure reducing equipment applied at all times (Mattresses etc.)?			
	2019	**2020**	**2021**
Yes	94 (93.06%)	104 (95.41%)	41 (97.61%)
No	5 (4.95%)	2 (1.83%)	1 (2.38%)
No response	2 (1.98%)	3 (2.75%)	0
Was the patient on correct type of mattress?			
	2019	**2020**	**2021**
Yes	94 (93.06%)	106 (97.24%)	42 (100%)
No	3 (2.97%)	1 (0.91%)	0
No response	4 (3.96%)	2 (1.83%)	0
Were the medical devices used are of correct size and were properly fitted?			
	2019	**2020**	**2021**
Yes	67 (66.33%)	89 (81.65%)	34 (80.95%)
No	8 (7.92%)	9 (8.25%)	8 (19.04%)
No response	26 (25.74%)	11 (10.09%)	0
Was the skin cushioned with dressing in high risk areas (e.g. nasal bridge)?			
	2019	**2020**	**2021**
Yes	43 (42.57%)	64 (58.71%)	27 (64.28%)
No	15 (14.85%)	17 (15.59%)	3 (7.14%)
No response	43(42.57%)	28 (25.69%)	12(28.57%)

The skin cushioning in high risk areas was satisfactory as it was done in42.57% in 2019, 58.71% in 2020 & 64.28% in 20121 of the patients. Table -13 shows moisture prevention strategies, which shows that where moisture barrier was used but diapers were not used frequently.

Table 13: Moisture prevention strategies

If patient was not incontinent, was the moisture barrier applied every 8 hourly?			
	2019	**2020**	**2021**
Yes	90 (89.10%0	101 (92.66%)	40 (95.23%)
No	8 (7.92%)	5 (4.58%)	1 (2.38%)
No response	3 (2.97%)	3 (2.75%)	1(2.38%)
Was the diapers applied?			
	2019	**2020**	**2021**
Yes	9 (8.91%)	5 (4.58%)	12(28.57%)
No	88(87.12%)	102 (93.58%)	24 (57.14%)
No response	4(3.96%)	2 (1.83%)	6 (14.28%)
Was transparent dressings, foam, and / devices were applied to reduce risk of shear and pressure from medical devices			
	2019	**2020**	**2021**
Yes	68 (67.32%)	77 (70.64%)	12(28.57%)
No	17 (16.83%)	13 (11.92%)	24 (57.14%)
No response	16 (15.84%)	19 (17.43%)	6 (14.28%)

Table -14 shows that nearly 100% patients over three consecutive years or their attendants were educated for pressure injuries, their prevention and care to be taken as well as skin care plan.

Table 14: Patient and Family Engagement

Was the family and patient educated about developed Pressure ulcer or patient's risk of developing pressure ulcer and skin care plan?			
	2019	**2020**	**2021**
Yes	100 (99%)	106 (97.24%)	42 (100%)
No	1 (0.99%)	3 (2.75%)	0

Table -15 summarizes the auditors comment where identification and grading of pressure ulcer has been found satisfactory. The reference to skin specialist has been taken in 18.81% patients in 2019 , 20.185 in 2020 and 45.23% in 2021. The documentation over three different audit time intervals was satisfactory. In terms of outcome , 64.36% patients in 2019 , 56.88 5 in 2020 and 66.67% in 2021 showed complete healing respectively.

Table 15: Auditors comment

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Was the lesion correctly identified as Pressure Ulcer?			
	2019	2020	2021
Yes	90 (89.10%)	98(89.90%)	37(88.09%)
No	6 (5.94%)	1(0.9%)	5(11.90%)
No response	5 (4.95%)	10 (9.17%)	0
Was the grade of Ulcer correctly identified?			
	2019	2020	2021
Yes	93(92.07%)	96(88.07%)	36 (85.71%)
No	2(1.98%)	1(0.91%)	1(2.38%)
No response	6(5.94%)	12 (11%)	5 (11.90%)
Was the reference given to Skin specialist for optimal management?			
	2019	2020	2021
Yes	19 (18.81%)	22(20.18%)	19(45.23%)
No	77 (76.23%)	76 (0.91%)	22(52.38%)
No response	5(4.95%)	11(10.09%)	1 (2.38%)
Was management suggested by skin specialist implemented?			
	2019	2020	2021
Yes	101(100%)	108(99.08%)	42(100%)
No	0	1(0.91%)	0
Was Documentation appropriately done?			
	2019	2020	2021
1	95 (94.06%)	98 (89.90%)	42(100%)
2	6 (5.94%)	9 (8.25%)	0
3	0	2 (1.83%)	0

6. Discussion

The documentation part has been satisfactory throughout the years that have been put to audit. Braden, Push score and grading of pressure injuries have been done. The most common area involving pressure injuries have been buttock region and coccyx as also seen in literature studies. The risk assessment has been done in timely manner. In terms of re assessment it has been observed that significant number of patients have new area of redness or have reported an improperly fitted medical device- 16.83%, 34.86% and 47.61% over the three consecutive years. The special diets suggested by dietician also had poor compliance initially in the year 2019 with 32.675 patients not receiving the changed or modified diet in first 24 hours of risk stratification however it reduced to 15.59% in 2020 and 7.14% in 2021 , significantly improvement is noted. In the strategy to minimize friction it is noted that skin cushioning was not done satisfactorily as only 42.57 % (2019), 58.71%(2020) and 64.28%(2021) positive affirmations were noted in three consecutive years. The moisture prevention strategies, patient education and documentation were satisfactory. The reference to skin specialist should be done more often than what is been reported in the study.

Table 16: Outcome

		OUTCOME	
	2019	2020	2021
EXPIRED	16 (15.84%)	15 (13.76%)	5 (11.90%)
HEALED	65 (64.36%)	62 (56.88%)	28 (66.67%)
SAME	20 (19.80%)	32 (29.35%)	9 (21.42%)

We have measured the outcome in two categories – first one includes patients who had pressure injury at the time of admission and second one without any pressure injury at the time of admission. Table-17-19 and Fig-1 &2, show that patients in category one , with pressure injury at the time of admission have showed improved healing rates over three years from 58.93%(2019) to 59.15%(2020) to 67.86% in 2021.The non improvement rate for this category declined from 25% in 2019 to 22.54% in 2020 and thereafter slightly increased to 25% in 2021.

Table 17: Patient outcome in relation to condition at the time of admission year 2019

Year 2019	Expired	Healed	Same	Grand Total
No Pressure injury at admission	7 (15.56%)	32 (71.11%)	6 (13.33%)	45
Pressure injury at time of admission	9 (16.07%)	33 (58.93%)	14(25%)	56
Grand Total	**16**	**65**	**20**	**101**

Table 18: Patient outcome in relation to condition at the time of admission year 2020

Year 2020	Expired	Healed	Same	Grand Total
No Pressure injury at admission	2 (5.26%)	20 (52.63%)	16 (42.10%)	38
Pressure injury at time of admission	13 (18.31%)	42 (59.15%)	16 (22.54%)	71
Grand Total	**15**	**62**	**30**	**109**

Table 19: Patient outcome in relation to condition at the time of admission year 2021

Year 2021	Expired	Healed	Same	Grand Total
No Pressure injury at admission	3 (21.43%)	9 (64.29%)	2 (14.29%)	14
Pressure injury at time of admission	2 (7.14%)	19 (67.86%)	7(25%)	28

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Grand Total	**5**	**28**	**9**	**42**

Similarly the rate of improvement for those patients without pressure injury at the time of admission show a fall in improvement from 71.11% in 2019 to 52.63% in 2020 and later increased to 64.29% in 2021. The non healing pressure injuries during same time period show initial increase from 13.33% (2019) to 42.10%(2020) and later improvement to 14.29%(2021).

The overall healing percentageshow decline from 64.36% to 56.88% in 2020 due to COVID pandemic with increased pressure on health services , shortage of nursing staff and reaalocation of COVID dedicated beds , however the latter half of 2020 show improvement with better management of cases leading to better healing rates as evident from percentage in early three months of 2021 which staood at 66.67%. (Fig- 3)

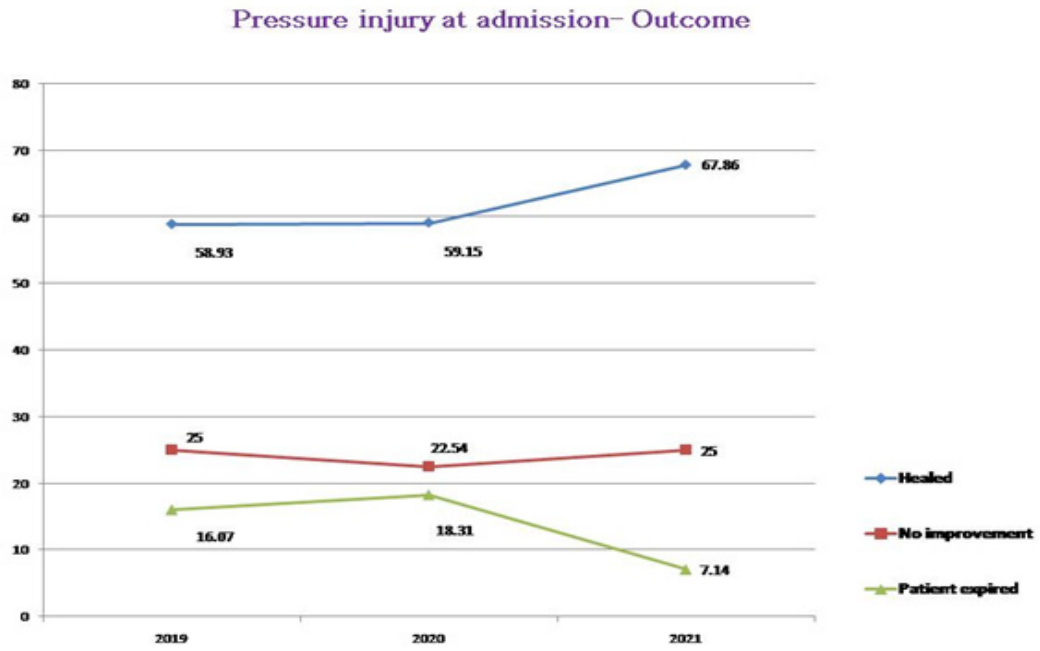

Figure 1: Outcome of patients who had pressure injury at the time of admission

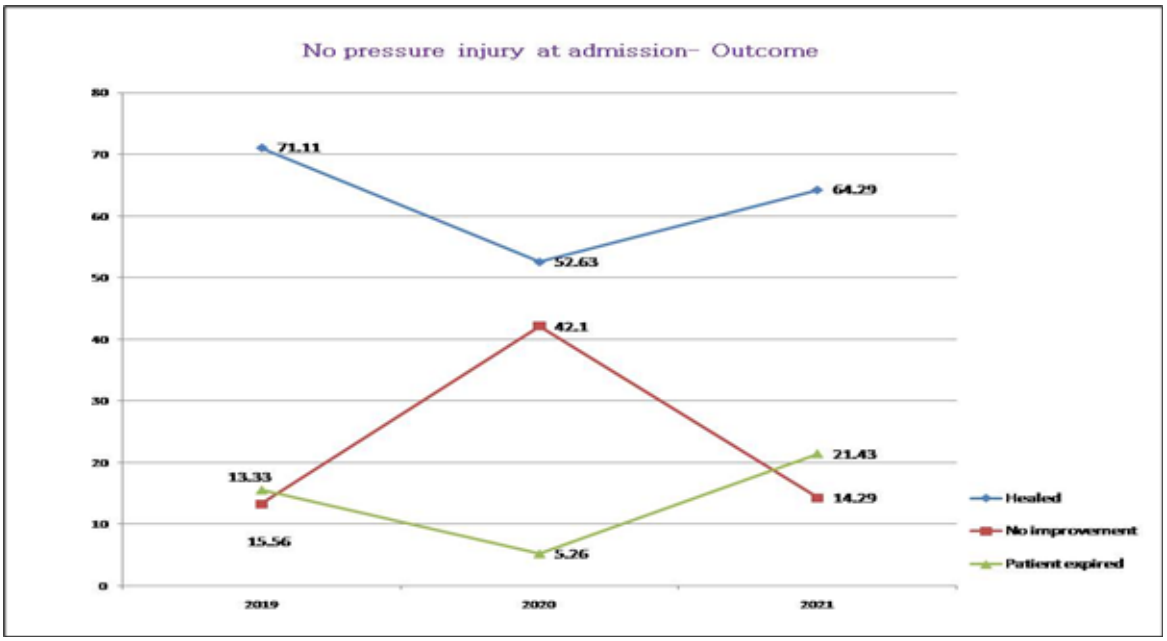

Figure 2: Outcome of patients who did not have pressure injury at the time of admission

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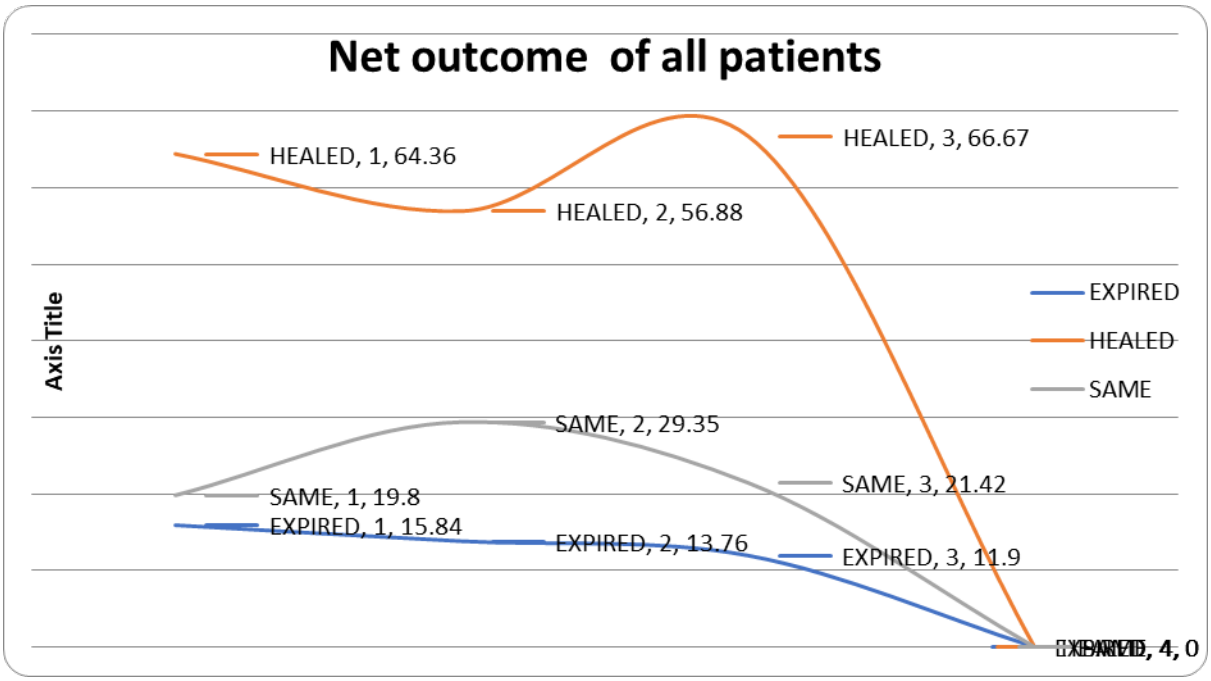

Figure 3: Net outcome over three years of pressure injury management

7. Conclusion

- In the reassessment of patients for pressure injury development of new areas of redness or improperly fitted medical device incidence in the current year 2021, stands at 47.61% which shows improvement over past years but the issue mandates careful observation and close follow up.
- The nutritional assessment shows that the special diet recommendations by the dietician are not followed in 28.57%, the issue needs attention in near future.
- The strategies for minimizing friction including the use of skin cushion in high risk areas was done in 67.28% which has improved from previous rates of 58.71% in 2020 and 42.57% in 2020 but it still needs to be improved further.
- The moisture prevention strategy relies on the use of transparent dressing, foam etc but the strategy took a dent after COVID pandemic as it reduced from 70.64% (2020) to 28.57% in 2021 which mandates attention add close follow up,
- In the audit done previously it has been indicated that reference to skin specialist has shown improvement from 20.18 % in 2020 to 45.23% in 2021 but it is of vital importance that a multidisciplinary approach is adopted for better management of pressure injuries in patients.
- The healing rate of pressure ulcer specially for those patients who do not have any pressure injury at the time of admission currently stand at 64.29% , with 14.29% showing no improvement , these rates are to be followed closely on quarterly basis so that necessary steps may be undertaken to improve healing of pressure injuries.

Take away message

Audits in clinical area on routine basis are vital for improvement and delivering quality health care services to patients.

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