



Health
Recovery
Solutions



Virtual Wound Care Strategies that Improve Outcomes and Boost ROI

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Virtual Wound Care Strategies that Improve Outcomes and Boost ROI

Objectives

1. What problems can we solve - a look at current trends
2. SHP data analysis: improving wound management
3. Application of data from HH to hospitals and health systems
4. Areas for clinical and financial improvement
5. Actual clinical outcomes and proven ROI



We would like to acknowledge Strategic Healthcare Programs (SHP) for providing this data to support improved wound outcomes throughout the Home Health Industry.

SHP improves quality and optimizes performance of home health agencies, hospices, skilled nursing facilities, and hospitals by providing real-time actionable analytics, benchmarks and dashboards.

Introducing HRS: WoundConnect

The presence of wounds and the cost to care for them has become a growing problem, needing an urgent solution. HRS has partnered with the wound experts to provide our customers a much-needed solution to this growing social and economic burden.

Experts

Highly trained expert Wound and Ostomy Certified Nurse Consultants

Process

Direct to clinician consultation, utilizing standardized, evidenced based wound recommendations by care setting and wound type

Technology

A remote patient monitoring and patient engagement solution that provides for wound imaging, education, survey assessment and biometric readings

Data

Crafted wound data and outcomes for your organization to prove clinical and financial outcomes

Why Remote Patient Monitoring for a Wound-Focused Program?

Remote Patient Monitoring (RPM) is “the collection of physiologic data, digitally stored and transmitted from patient to clinician/provider for interpretation and intervention.”

HRS provides RPM to a variety of health settings to address the common health care issues.

HRS RPM products can provide more than just biometric data as outlined below:

- ✓ Camera capability to allow patient to take images of wounds, edema, skin rashes etc.
- ✓ Virtual Visit Capability: allow multiple disciplines and providers to one virtual meeting
- ✓ Educational tools for patient engagement (video and pdf)
- ✓ Quizzes that survey for education comprehension
- ✓ Track and Trending of biometric data
- ✓ Ability to create custom surveys for your patients
- ✓ Obtain biometric readings for BP, Temp, Blood Glucose, Pulse Ox, Weight, HR



The problems and trends

Current Trends

WellSky 2023 Evolution of Care Report

- 2,000 hospitals
- 130,000 post-acute providers
- 13 million patients

Hospital LOS is Increasing



+11%

For patients discharged to home health, hospital ALOS has increased 11%
(2022 vs. 2019)



+12%

For patients discharged to SNFs, hospital ALOS has increased 12%
(2022 vs. 2019)

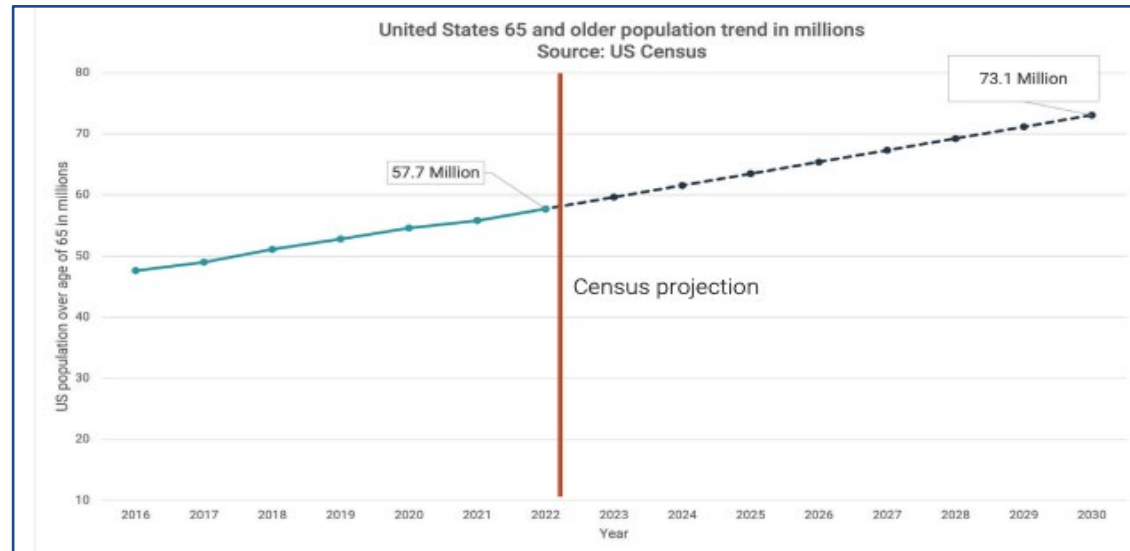
- ❖ Increased cost
- ❖ Longer wait times
- ❖ Decreased patient satisfaction and access to care
- ❖ Reduced overall capacity of the hospital
- ❖ Limits the ability to treat new patients
- ❖ May result in cancelled or delayed procedures

Current Trends

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Hospitalized Patients are Older and More Acute at Discharge



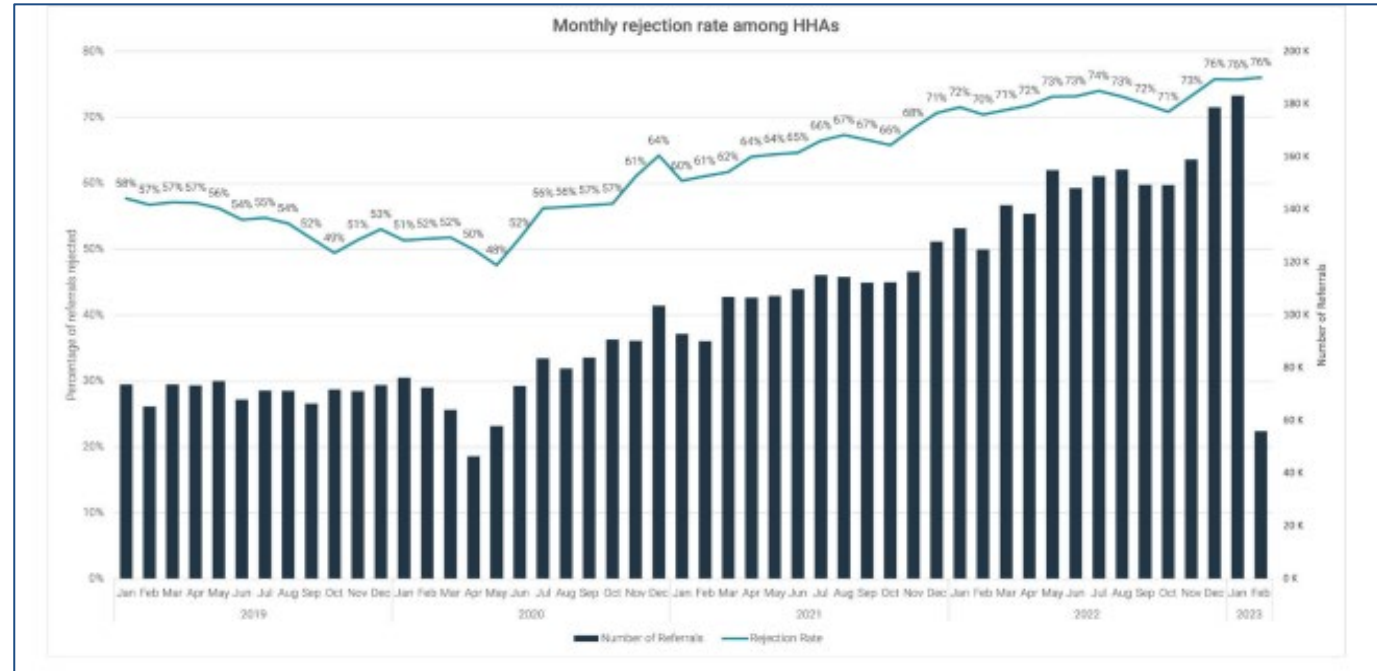
- ❖ 6% increase in acuity at discharge compared to 2019 average (van Walraven Comorbidity Score)
- ❖ More complex care needs
- ❖ Higher risk of complications and readmissions after discharge
- ❖ Estimated 73 million baby boomers in the United States will be ≥ 65 by 2030.

Current Trends

WellSky 2023 Evolution of Care Report

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Post Acute Referral Rejection Rates are Increasing



- ❖ HHA referral volumes have increased 11% since 2020
- ❖ SNF referral volumes have increased 10% since 2020
- ❖ 76% of patients referred for home health care were denied in 2022, a 22% increase from 2019
- ❖ 88% SNF referral rejection rate of patients [mcknightsseniorliving](https://www.mcknightsseniorliving.com)

**What does the
data point us to?**

HHA Evidence

Wound as Primary
Diagnosis

SHP Wound Data	2020-2022
Total # of Agencies	5,000
Total # 30-day episodes	2.7 million

HHA Average Risk of Hospitalization

SHP Wound Data (CY 2022)

Wounds	3.5*
All Clinical Groups	2.7*

**Scoring configuration per SHP*

- ❖ Wounds have a 29.6% higher risk of hospitalization
- ❖ Wounds represent a moderate risk of 30-40% by the SHP 1-9 scoring system

HHA 30 Day Rehospitalization & 60 Day Hospitalization Rates

SHP Wound Data (CY 2020-2022)

	2020 All Clinical Groups	2020 Wound Clinical Group	2021 All Clinical Groups	2021 Wound Clinical Group	2022 All Clinical Groups	2022 Wound Clinical Group
30-Day	11.8%	15.3%	11.4%	14.7%	11.6%	15.4%
60-Day	13.9%	17.7%	13.4%	17.2%	13.7%	18.2%

HHA Admission Source & Timing by Period

SHP Wound Data (CY 2022)

	Early Community (1)	Early Institution (2)	Late Community (3)	Late Institution (4)
Wounds	12.4%	10.2%	73.1%	4.3%
All Clinical Groups	12.2%	23.2%	59.8%	4.8%

Late Community Referrals

- ❖ Late Community - Lower reimbursement rate
- ❖ Indicates need for:
 - Improved wound management plan
 - Improved visit and supply cost management

HHA Skilled Nursing Visits

SHP Wound Data (CY 2021,
2022)

	2021 All Clinical Groups	2021 Wound Clinical Group	2022 All Clinical Groups	2022 Wound Clinical Group
SN Visits Per Stay	7.0	16.1	7.0	16.7
All Visits Per Stay	17.41	22.81	17.18	23.39

- ❖ Wounds as a primary diagnosis drive increased visit utilization
- ❖ Corstrata Customer Testimonial - decreased visit utilization for HH wound patients by 50%

HHA Average Length of Stay vs Corstrata Average Wound Lengths of Stay - Customer Testimonials

SHP 2021 and Corstrata Customer

	SHP 2021 All Clinical Groups	SHP 2021 Wound Clinical Group	2021 Corstrata Customer Wound Clinical Group
Days	53.5	68.2	55.0

- ❖ Wounds as a primary diagnosis drive extended lengths of stay

HHA Pressure Injury Staging Errors

SHP Wound Data (CY 2022)
n= 228,944
PI=28% total wounds #1 top
primary wound diagnosis

ICD-10 Description 3	Sum of Periods	Average SN Visits (30-Day Episode)	Average LOS
DTI	6,362	6.17	75.8
Stage 1	5,610	4.99	68.5
Stage 2	86,350	6.04	78.50
Stage 3	56,038	6.98	94.10
Stage 4	58,081	8.08	119.80
Unstageable	25,603	6.81	83.80
Grand Total	228,944	6.65	89.0

- ❖ Data suggest above inaccurate staging and treatment of less severe pressure injuries.
- ❖ Corstrata audits have revealed up to 50% misidentification of staging of pressure injuries

HHA LOS vs Expected Healing Times for Pressure Injuries

SHP Wound Data (CY 2022)

ICD Description 3	Average LOS (2022)	Expected Healing Times
Stage 1	65.37	2-3 days
Stage 2	76.64	23 -31 days
Stage 3	91.12	1-4 months
Stage 4	115.21	3 months to 2 years

- ❖ Data show significant discrepancy between expected healing times and average LOS

HHA Incomplete Coding of Non- Pressure Chronic Ulcers

SHP Wound Data (CY 2022)

- Non-Pressure Chronic Ulcer = #8 top primary wound diagnosis
- N=24,338

Coded As:	# of Episodes	Average SN Visits	Average LOS
Non-Pressure Chronic Ulcer*	24,338	7.34	87.7
Unspecified Severity* (i.e., with exposed fat layer)	4,090	7.27	84.2
Unspecified Part* (location & laterality; i.e., R heel)	2,492	7.28	86.3
Unspecified Severity & Part*	886	7.65	87.7
Wound Grouping Reimbursement N/A	7,468		
Episodes Not Properly Documented for Reimbursement	31%		

* Requires specific documentation of severity, location, and laterality to receive wound grouping reimbursement

- ❖ Data suggest
 - Incomplete or inaccurate coding of chronic wounds has a significant negative impact on reimbursement

Industry-Validated ROI of a Wound Specialist

Berry Dunn Study of > 1000 Home Health Agencies

Positive PDGM Surplus



Increased Patient Satisfaction



Improved Quality of Patient Care Star Ratings



100% of Agencies in the TOP 10% have Wound Specialist access
100% of Agencies in the BOTTOM 10% DO NOT.



74% Agencies with LOWEST ER utilization have Wound Specialist access.
37% Agencies with HIGHEST ER utilization DO NOT

Case studies

Live Video Virtual Visit

Case Study

Virtual Home Care Wound Consultation



Healing Sacral
Stage 4



Right Hip Stage 4

Patient History: 62 yo male quadriplegic with a primary diagnosis of multiple sclerosis.

- Recent hospitalization for:
 - Septic shock r/t UTI
 - Serial wound debridement
- Immobility with ADL dependence
- Braden Risk Assessment score of 11 (high risk)
- Urinary and bowel incontinence
- Significant limb contractures
- Multiple complex wounds with polymicrobial infections

Situation: Patient discharged to home from an LTACH with orders for 2x weekly wound clinic visits and home health SN visits 2x daily for wound care. Home health unable to provide BID SN visits and patient unable to follow up with wound clinic visits via ambulance transport 2x weekly

Stated Reason for Visit: Provide recommendations appropriate for Home Health management and supply utilization, infection management, promote wound closure

	Before WOC Nurse	After WOC Nurse Consult
SN Visit / Dressing Change Frequency	BID	3X per week and PRN break in dressing seal or soilage

Home Health Impact from Wound Patient Non-Admit

Home Health rejects institutional referral - (non-admit)

- Complex paraplegic patient with multiple sclerosis and multiple stage 4 pressure injuries (ulcers)
- Orders for 2 times/day dressing changes (visits + supplies cost = \$20,275)
- Missed episodic revenue- \$3,123 (avoided loss of \$17,152)

Patient Admitted with Corstrata Consultation

- Patient coded pressure ulcer stage 4 as principal diagnosis
- HHRG \$3,123
- Orders for 3X/Week dressing changes (visits + supplies cost=\$2,745)

Admission with Evidence Based Treatment Plan results in increased revenue of \$3,123 and net margin of \$378

Case Study

Live Video Visit With
Ostomy Patient, Caregiver
(mother), and **Home
Health** Nurse Present



*Follow up visit @ 19 days

Situation:

- Mentally-incapacitated adult child with a new ileostomy
- Discharged home following surgery and being cared for by a working mother
- Residence is a 4-hour drive from the facility where ostomy surgery was performed
- Receiving home health services

Assessment:

- Complicated abdomen with an open wound and the new stoma in very close proximity (*Note: Wound being treated with NPWT*)

Virtual Intervention:

- Mother and HH Nurse instructed on how to obtain and use products to isolate the wound from the stoma

Before Virtual WOC Nurse	After Virtual WOC Nurse
<ul style="list-style-type: none">• Ostomy appliance changes every 2-3 hours due to improper fit• Significant leakage from stoma into wound• Peristomal skin breakdown causing extreme discomfort• Mother unable to work due to patient care demands	<ul style="list-style-type: none">• Appliance change every 3 days at a supply savings total of \$579.96/week.• SNV visits decreased from daily to once a week• Wound progressing toward complete closure at F/U video visit day 19• Patient comfortable• ER & rehospitalization avoided• Mother able to return to work• Customer-reported improvement in QOL <i>"This has changed my life."</i>

Case Study

Virtual Home Health Wound Consultation



8/9/22



10/18/22

Time to closure = 10 weeks

Method: Store and forward wound image and assessment

Patient History:

- Multiple sclerosis
- Wheelchair bound
- Declined hospital bed with pressure redistribution overlay

Our Assessment: Unstageable pressure injury with moisture-associated tissue damage from incontinence

	Before Corstrata	After Corstrata
Treatment Plan	Silvadene with foam cover dressing	<ul style="list-style-type: none">▪ Hypochlorous wound cleanser▪ Mesalt with foam cover dressing▪ Pressure mapping and off-loading▪ Wheelchair cushion▪ Nutritional support▪ Patient/caregiver education in self-management of wound
Dressing Change Frequency	Daily for several months	3X per week for 5 weeks 1X per week for 5 weeks
SN Visits	Daily for several months	20 total visits remained till closed
Total Supply Cost	\$483 x 10 weeks	\$214.50 x 10 weeks

Case Study

Hospital @Home Live Wound Consult



RLE



Right Heel

Diagnosis: Cellulitis, CHF, DM, Neuropathy, ESRD, Venous Disease, Chronic Afib

Reason for Referral: DC planning - need < BID wound care for HH acceptance

- Recurrent resistant cellulitis with areas of necrosis
- Multiple hospitalizations over past several months
- Copious LE weeping

Recommendations:

- Evidenced based treatment plan including:
 - Dressings to address bacterial burden, drainage and edema management, and peri wound skin protection
 - Disease management plan with orthotics, and diagnostics to rule out osteomyelitis and arterial disease

ROI Considerations: *Virtual on-demand consultation:*

- Is highly compatible with H@H care
- Can prevent recurrent hospitalizations & returns to brick and mortar
- May increase referrals for patients with complex wounds

Outcome:

- Timely and successful management of a complex wound using a H@H virtual consultation platform.
- Identification of chronic recurrent heel wound of several years duration after stepping on a sharp object
- Prevention of rehospitalization

Chart Audit Program Offering for HHAs:

- 1st 5-10 customers
- Up to 15 patient chart audit

Evaluating and providing opportunities for improved quality and financial outcomes for wound patients

Goal: Demonstrate how Corstrata experts are able to more accurately identify and stage wounds for optimal and appropriate reimbursements, visit frequencies, and supply spend

Overview: Prospect agency will provide Corstrata with up to 15 patient charts that include the following data below to be used for the audit. The data will be submitted to Corstrata via HIPAA-compliant forms provided by Corstrata.

HHA Requirement: Search EMR database for newly admitted patient(s) with a wound(s) and submit documents of:

- Admission OASIS
- Patient history (H&P) / face sheet that includes comorbidities and other relevant information
- SOC color photo(s) of wound(s) and wound assessment(s)
- SOC wound orders with nursing visit and dressing frequencies

Corstrata

Home Health
Customer
Return on
Investment

Return on Investment Calculation

SOC Retrospective Audit:

- 15 patients
- 19 wounds

Skilled Nurse Visits:

- Net decrease in visits = 88
- National average cost per visit = \$180.79*
- Visit cost savings with Corstrata = \$15,910
- Wound Dressings
 - Net decrease in wound dressings = 88
 - Average wound dressings cost = \$6.04**
 - Wound dressing cost savings with Corstrata = \$531

30-Day Savings with Corstrata Consultations = \$16,441

Savings per Patient = \$1,096

Return on Investment = 5X

* [SOURCE: Home Care Magazine 2022](#)

** Agency reported cost

Questions?