


## EVIDENCE BASED OUTCOMES USING TECHNOLOGY

Can Treatment Plan Adherence Correlate With Better Clinical Outcomes?

Can better patient outcomes correlate with better practice outcomes?



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## EVIDENCE BASED OUTCOMES USING TECHNOLOGY

Can Treatment Plan Adherence Correlate With Better Clinical Outcomes?

Can better patient outcomes correlate with better practice outcomes?



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## How I Got Into Technology



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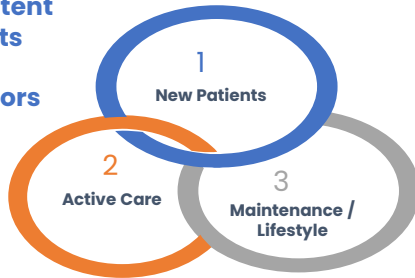
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### Patient Visit Data From 700+ Clinics

Goal was consistent measurements

Can chiropractors agree?



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### Types Of Clinics Evaluated

- Activator
- CBP/Pettibon (spinal correction)
- Diversified
- Gonstead
- Upper cervical
- Hi & low volume
- Insurance
- Personal injury
- Medical/chiropractic

What kind of practices do you have?

How should we measure?

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- Exam findings (what kind is best?)
- Functional movement score
- Insight subluxation station
- Questionnaire score (Oswestry LBP, Neck NDI, Roland-Morris LBP, VAS)
- X-ray findings

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We Needed A Standardized  
Approach For All Types Of  
Providers

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**Which Method Will Doctors In Practice Agree  
On?**

- A. Exam findings
- B. Functional movement score
- C. Insight subluxation station
- D. Questionnaire score (Oswestry LBP, Neck NDI, Roland-Morris LBP, VAS)
- E. X-ray findings
- F. None of the above

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F) None Of The Above

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What standardized measure  
can we measure with  
TrackStat?

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- A. 5-Star reviews
- B. New Patients
- C. Show % / Kept Apt %
- D. PVA (what should this be?)
- E. Revenue
- F. Or....

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What About?

Treatment plan  
adherence

**Completed  
Treatment Plans**



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## How Is Your Treatment Plan Adherence

Shiftset	4	5	6	Score
Organization of treatment protocols	You have treatment protocols in your arsenal, but you don't have them organized where your support team knows your plans	You have identified your treatment protocols and plans you want your patients to complete	You have identified the treatment protocols and plans you want your patients to complete. Your support team knows what protocols are and can support you	
Team and patient know the recommendation and any modifications	Your support team needs to know what your recommendations are, and any treatment changes need to be communicated. The patient bases progress on symptom changes	You have a written treatment plan that your admin team can access. The patient receives a progress exam as needed	The support and provider team communicates about your patient's treatment and progress. As a result, your patient understands how progress is measured, and there is a re-evaluation process	
Admin team has a method of tracking	Your method is based on verbal communication after the visit	The team has access to a written plan and can search every patient manually to determine when their next visit is	Your support team has a daily or weekly process where the patients are in their treatment and who does not have a follow visit	
Progress measurement	Your progress is measured by subjective feedback from the patient	You have objective or questionnaire measures	You have objective or questionnaire measures and make appropriate modifications when necessary	
Periodic new patient audits	You occasionally look at your schedule to determine which patients stopped with care. Admin progress exams	Your progress is measured by subjective feedback from the patient	You and your team periodically review your last 30-60 days of new patients to determine the outcomes. Did they stop because of discharge/refer-out, AMM, or patient self-discharge (they stopped coming without a progress exam)	

13

## Chat GPTs Answer to Treatment Plan Adherence

GPT = Generative Pre-trained Transformer (GPT)

Created by Open AI – Sam Altman, Elon Musk, Peter Thiel and others

Generative AI is software that can generate new content, rather than using preexisting content

GPT 1, 2, 3, 4.0 have different levels of processing transformers

1 processed data sequentially, like one word at a time in a sentence and it could only process a sentence at a time vs paragraphs like they do in GPT3

GPT4 Turbo Further advancements have led to even more sophisticated understanding and generation capabilities, enabling the model to produce more nuanced and contextually appropriate responses

14

## Chat GPTs Answer to Treatment Plan Adherence

Treatment plan adherence refers to the extent to which a patient **follows their prescribed treatment plan as intended by their healthcare provider.**

Adherence to a treatment plan is an important factor in the success of any medical or healthcare intervention, including chiropractic care. **A patient who adheres to their treatment plan is more likely to experience positive outcomes and a quicker recovery compared to a patient who does not follow the plan.**

Chiropractors can help **promote treatment plan adherence by clearly communicating the plan to the patient, explaining the rationale behind the recommended treatments, and addressing any questions or concerns the patient may have.** In some cases, chiropractors may also work with other healthcare providers or provide additional resources to help patients adhere to their treatment plan.

Factors that can impact treatment plan adherence include a **patient's beliefs and attitudes towards their treatment,** their level of pain and discomfort, and the availability of resources and support. By considering these factors and addressing any barriers to adherence, chiropractors can help ensure that their patients receive the full benefit of their care.

15

### Incomplete treatment plans = incomplete work

- A patient who adheres to their treatment plan is more likely to experience positive outcomes compared to a patient who does not follow the plan.
- Clearly communicating the plan to the patient, explaining the rationale behind the recommended treatments, and addressing any questions or concerns the patient may have

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### Survey

How many track their patients until they complete their recommended treatment plan (doesn't mean prepay)

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### Survey

How many know what percentage finish their treatment plans?

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## Survey

Would the odds of a desired outcome for the patient increase if they completed their treatment recommendations?

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## Recommendations?

- 50 yoa male
- Insidious onset of low back pain
- Acute 6/10 pain scale
- WNL neurological and myotome
- Mild-moderate spondylosis
- Patient has localized pain with movement and sleeping.
- Goal: golfing 2-3x/wk



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## How long should a treatment plan be?

- 12 weeks to build muscle
- What is the minimal amount of time we should see patients?



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### Recommendations?

- 1992 Mercy documents (DC, MD, PhD) found 3x/wk for 4 wks and 1-3x/wk for 4-8 weeks
- 16, 20 to 36 visits
- Dose-response for chiropractic care of chronic low back pain. *Spine J.* 2004
- Dose-response and efficacy of spinal manipulation for care of chronic low back pain: a randomized controlled trial. *Spine J.* 2014



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Evidence is recommending 8 to 12 weeks of care...

why are we ending it early?

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Survey:

What percent complete 8 to 12 weeks of care?

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Stopping Short Leads To  
Reoccurrence Of Back Pain

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Your Patients Came To You  
For A Solution

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**Solution = Destination**

**Patient = Hero**

**You = Guide**

THE HERO'S JOURNEY



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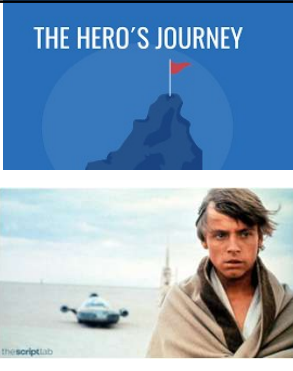
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**Defeat Galactic Empire  
(destroy death star)=  
Destination**

**Luke Skywalker = Hero**

**Yoda = Guide**

THE HERO'S JOURNEY



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**Becoming the one =  
Destination**

**Neo = Hero**

**Morpheus = Guide**

THE HERO'S JOURNEY



29

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Chiropractors can help promote treatment plan adherence by clearly communicating the plan to the patient, explaining the rationale behind the recommended treatments, and addressing any questions or concerns the patient may have. In some cases, chiropractors may also work with other healthcare providers or provide additional resources to help patients adhere to their treatment plan.

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- Listen to them
- Understand their needs
- Refer to them
- Want to stop early...no problem, just change the goal

THE HERO'S JOURNEY



How can you generate referrals?  
NPS score? How likely are you to  
Refer on a scale of 0-10  
9-10 ask

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How Many Of You Became A  
Chiropractor Because Of An  
Impactful Experience As A  
Patient?

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Would You Be Willing To  
Work Harder To Ensure  
More Patients Have That  
Experience?

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Can't Make An Impact If You  
Don't Finish The Job

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## What Do I Track If My Patients Want A Fix?

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### Treatment Plan (progress & compliance)

- You can't track compliance if they don't have an appointment
- It's easy for you and your staff to lose track of patients
- A second set of eyes from your staff can help you provide evidence-based plans (assuming your plan is documented)

Start Date	Frequency	Total Visits	Remaining Visits	Scheduled Visits	Unscheduled Visits	Last Visit	Next Visit	3 Weeks Ago	2 Weeks Ago	Last Week	Current Week
06/21/2022	2x/wk	10	8	4	4	06/22/2022	06/24/2022	0	0	0	2
06/20/2022	2x/wk	12	11	3	9	06/20/2022	06/27/2022	0	0	1	1

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### Prepare For The Day (pre-shift)

- Plan your plays, plan your day
- Efficient patient flow
- Minimize rushed appointments
- Which allows for:
  - Re-examinations (determine progression)
  - Various appointments (longer vs shorter)
  - Scheduling future visits
  - Collect patient balances



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### Preparing for the day improves patient satisfaction

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### Patient Dissatisfaction Reasons

- Long wait times
- Feeling unheard
- Not enough time with the doctor
  - Result of an unmanaged schedule
- Confusion about insurance or fees
  - Collecting estimated amounts per visit or upfront
- Practice simpler explanations



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Preparing allows you to serve more people in less time with a higher satisfaction rate

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### Why Re-exams/Progress

- Check status, progress, change treatment plan
- Deal with treatment plan compliance issues
- What was their goal? Do they still want it? You are the sherpa, but they still have to climb the mountain
- Re-explain treatment rational
- Exercises rational

### THE HERO'S JOURNEY



41

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### Team Meetings

- Hospitals have a team meeting to discuss patient treatment
- Does your team know what your plans are? (how does your team know of your changes?)
- Does the patient know what your plans are?
- Is it written down?
- How is progress measured?
- If progress is not as expected, how does the team adjust to a new plan of care?



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Patient Audits

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Pick 30–60 Day Period

- Look at all new patients and determine what happened to them
- Did they complete their plan?
- Did they stop on their own?
- Did you end their care?
- Did you refer out?
- Etc

Last Name	First Name	First Visit Date	Last Visit Date	Next Visit Date	Total Visits	Future Appointments
Zubair	Alireza	01/29/2021	10/19/2021		2	2
Cornelius	Amelia	01/27/2021	04/13/2021		10	1
Holtz	Harlan	01/20/2021	05/25/2022		42	1
Adams	Chloe	01/06/2021	01/06/2021		1	0
Altomare	Carrie	01/06/2021	01/06/2021		1	0

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Patient Drop Off Analysis – General Audit

- Example shows a drop off between visit 1–3 & 11–13
- Solution:
  - fix education/tx rational process from visit 1–3 and before 11–13
  - Progress exam before drop off point

Patient Drop Off

Visit	Total Patients
1	30
2	23
3	18
4	18
5	16
6	16
7	16
8	16
9	15
10	14
11	10
12	9
13	3
14	3
15	3

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### Patient Education – Treatment Rational

- During appointment
  - Active care vs passive care
  - Antibiotics recipe card
  - Do you have any?
- Handouts
  - These can be shared with friends/family
  - Easier than a referral
- Educational drip messages (text, email, video)
  - Referrable content examples
- Workshops
  - Posture, pain and arthritis workshop

Clearly communicate the rational for the treatment and let them know how progress is measured



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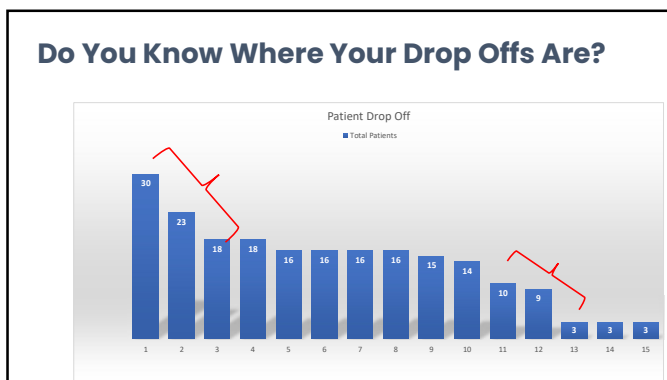
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### Maintain Evidence Based Treatments– Cancelled, Missed Appointment and No Future Appointment Tracking

- Signs and symptoms of non-compliance
- Symptoms disappear long before functional improvement
- Action Steps
  - Have a list of cancelled & missed & no call/no-shows
  - Track how many are rescheduled
  - Treatment plan patients with no future appointment



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### Okay To Discharge/Refer Out or Co-Treat or Continue with Preventative Care

- If you can't help them, refer them out or co-treat
- Who do you co-treat with?
- You should end the treatment if you can't help them and won't co-treat
- Okay to continue with preventative care



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### Who Is Responsible For Adherence

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### Patient Provider Front Desk

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Patient must trust the  
provider is the right solution

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Provider must set  
expectations and deliver  
results

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Front Desk Administer  
Orders & Manage  
Appointments

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How Do You Measure Success?

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Simple Global Measures for Treatment Plan Adherence

Weekly Methods

Monthly Methods

- Track future 30 days
- Future schedule rate, 75% or greater
- Weekly visits

- Drop offs
- % of treatment plans finished and with future visit

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Front Desk KPIs – Activities & Outcomes

- Activities
  - Scheduled appointments
  - Outbound texts, emails and calls
- Outcomes
  - Track future 30 days
  - Future schedule rate, 75% or greater
  - Rescheduling rate

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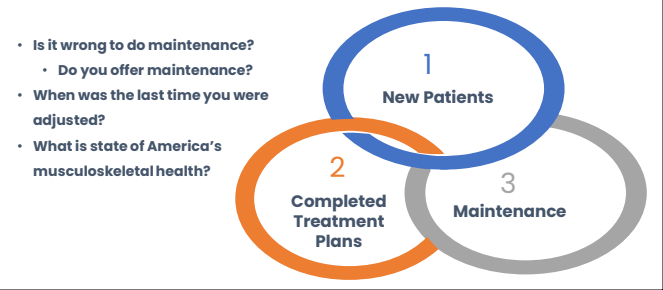
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Patient Retention Formula



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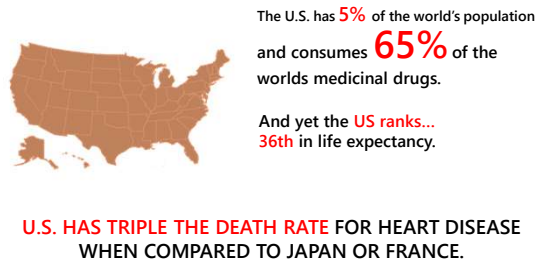
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STATS ON MODERN MEDICINE



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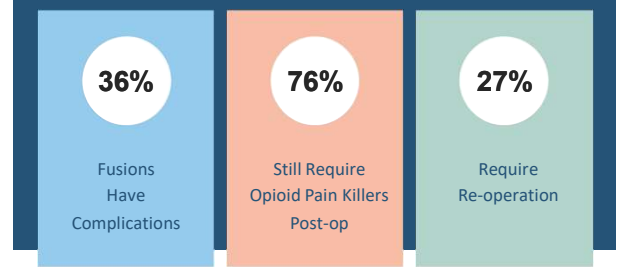
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Long-term Outcomes Of Lumbar Fusion



Reference: Spines, 33(26), Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2711111/>

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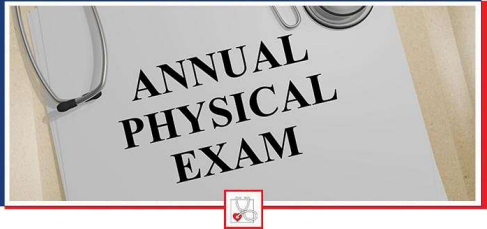
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Annual Physicals? Dental check ups? Oil Changes on our cars

Why Not Monthly Musculoskeletal Exam?

ANNUAL PHYSICAL EXAM



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Annual Physicals? Dental check ups?

Why Not Monthly Musculoskeletal Exam?

- MSDs account for one-third of all workers compensation costs.
- Direct costs are \$20 billion a year. **Total costs are between \$45-54 billion.**
- Indirect costs (lost productivity, etc)
- MSD cases require 38% more lost time days than the average injury/illness.

MSDs ACCOUNT FOR 33% OF ALL WORKERS COMPENSATION COSTS



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Annual Physicals? Dental check ups?

Why Not Monthly Musculoskeletal Exam?

- Do you have a list of all your maintenance care patients?
- Do you have easy ways for payment and tracking?
- Do you who doesn't have their next visit scheduled?
- How do you manage your maintenance care patients?



keeping everything running.

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TX Plan Adherence = More Positive Outcomes

• Non-improvement

➡

Appropriate referral

• Completed tx

➡

Your best results

• Better outcomes

➡

5-star reviews & referrals

• Staff driven

• More office production and financial growth

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New Patients

2

Tx Plans

3

Maintenance

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How Is Your Treatment Plan Adherence

Skilset	1	2	3	4	5	6	7	8	9	Score
Organization of treatment protocols	You have treatment protocols in your internal, but you don't have them organized where your support team knows your plans		You have identified your treatment protocols and plans you want your patients to complete			You have identified the treatment protocols and plans you want your patients to complete. Your support team knows what protocols are and can support you				
Team and patient know the recommendation and any modifications	Your support team needs to know what your recommendations are, and any treatment changes need to be communicated. The patient bases progress on symptom changes		You have a written treatment plan that your admin team can access. The patient receives a progress exam as needed			The support and provider team communicates about your patient's treatment and progress. As a result, your patient understands how progress is measured, and there is a re-evaluation process				
Admin team has a method of tracking	Your method is based on verbal communication after the visit		The team has access to a written plan and can search every patient manually to determine when their next visit is			Your support team has a daily or weekly process where the patients are in their treatment and who does not have a future visit				
Progress measurement	Your progress is measured by subjective feedback from the patient		You have objective or questionnaire measures			You have objective or questionnaire measures and make appropriate modifications when necessary				
Periodic new patient audits	You occasionally look at your schedule to determine which patients stopped with care. Admin progress exams		Your progress is measured by subjective feedback from the patient			You and your team periodically review your last 30-60 days of new patients to determine the outcomes. Did they stop because of discharge/enle-out, MIA, or patient self-discharge (they stopped coming without a progress exam)				
Total _____										

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Action Steps For Next Week

• Make a list of patients on a treatment plan, and track until they reach desired outcome

• Make a list of maintenance care and track them as well

• Receptionist track future schedule rate

• Team meeting about patients

• Pre-shift huddle

• Re-exam/progress exams

• Treatment rational explanations

Knowledge without action is  
wastefulness and action without  
knowledge is foolishness.

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