

Improving Efficiency and Clinical Oversight for Orthodontic Observation Patients Using Remote Monitoring

Author: **Dr. Dan Bills**

Executive Summary

Observation patients represent a substantial and often under-optimized segment of the orthodontic population. Traditionally, these patients are seen at six-month intervals to monitor growth, dental development, and eruption patterns—visits that consume chair time while delivering limited clinical intervention. At Innovative Orthodontics (iOrtho), we re-evaluated this model and implemented a remote observation protocol using DentalMonitoring (DM).

By transitioning observation patients to a structured remote monitoring workflow, with scheduled scans every 90 days and a single annual in-office visit when radiographs are required, we significantly reduced unnecessary appointments while maintaining, and in many cases improving, clinical oversight and patient engagement. Across a population of more than 3,000 observation patients, this approach eliminated over 3,000 in-office visits annually, freeing approximately 46 clinical days per year. This translates to approximately \$426,000 in recovered annual value, not as direct revenue replacement, but as capacity that can be redeployed toward higher-value clinical care.

This paper outlines the rationale, workflow, clinical application, and operational impact of remote monitoring for orthodontic observation patients, based on real-world implementation in a busy private practice.

The Challenge of Traditional Observation Protocols

Observation patients—typically younger children in mixed dentition—require careful monitoring of growth and eruption timing, yet they often do not require immediate orthodontic intervention. Historically, orthodontic practices have relied on six-month recall visits for these patients to ensure appropriate timing of treatment initiation.

While clinically familiar, this approach introduces several inefficiencies:

- Chair time is consumed by visits with minimal active treatment
- Schedules become congested with low-acuity appointments
- Providers and teams spend valuable time confirming “no change”
- Practices face a false dilemma between efficiency and patient engagement

Despite these drawbacks, many orthodontists maintain this model out of concern that reducing visit frequency could compromise clinical oversight or weaken relationships with patients and families.



Dr. Dan Bills

Dr. Dan Bills is a board-certified orthodontist and educator who founded Innovative Orthodontics, a state-of-the-art practice with three locations in Southern New Jersey. He earned his degrees from Lafayette College and Harvard University, then completed his orthodontic residency at the University of Illinois. A Diplomate of the American Board of Orthodontics and Fellow of the American College of Dentists, he serves on faculty at Harvard and the University of Pennsylvania, where he has been named “Teacher of the Year.” He lectures internationally on clinical orthodontics and practice efficiency, with a passion for helping colleagues work smarter and live better.

Reframing Observation as Active Surveillance

At iOrtho, we reframed observation not as passive waiting, but as active surveillance. The key shift was decoupling clinical monitoring from physical presence in the office.

Using DM, observation patients are enrolled in a remote observation protocol that includes:

- Scheduled intraoral scans every 90 days (Figure 1)
- Automated tracking of eruption and developmental milestones (Figures 2-3)
- Provider review and clinical decision-making based on scan data (Figure 4)
- One planned annual in-office visit when panoramic imaging is required

This model allows clinicians to evaluate patients more frequently than traditional six-month recalls, while dramatically reducing unnecessary in-office appointments.

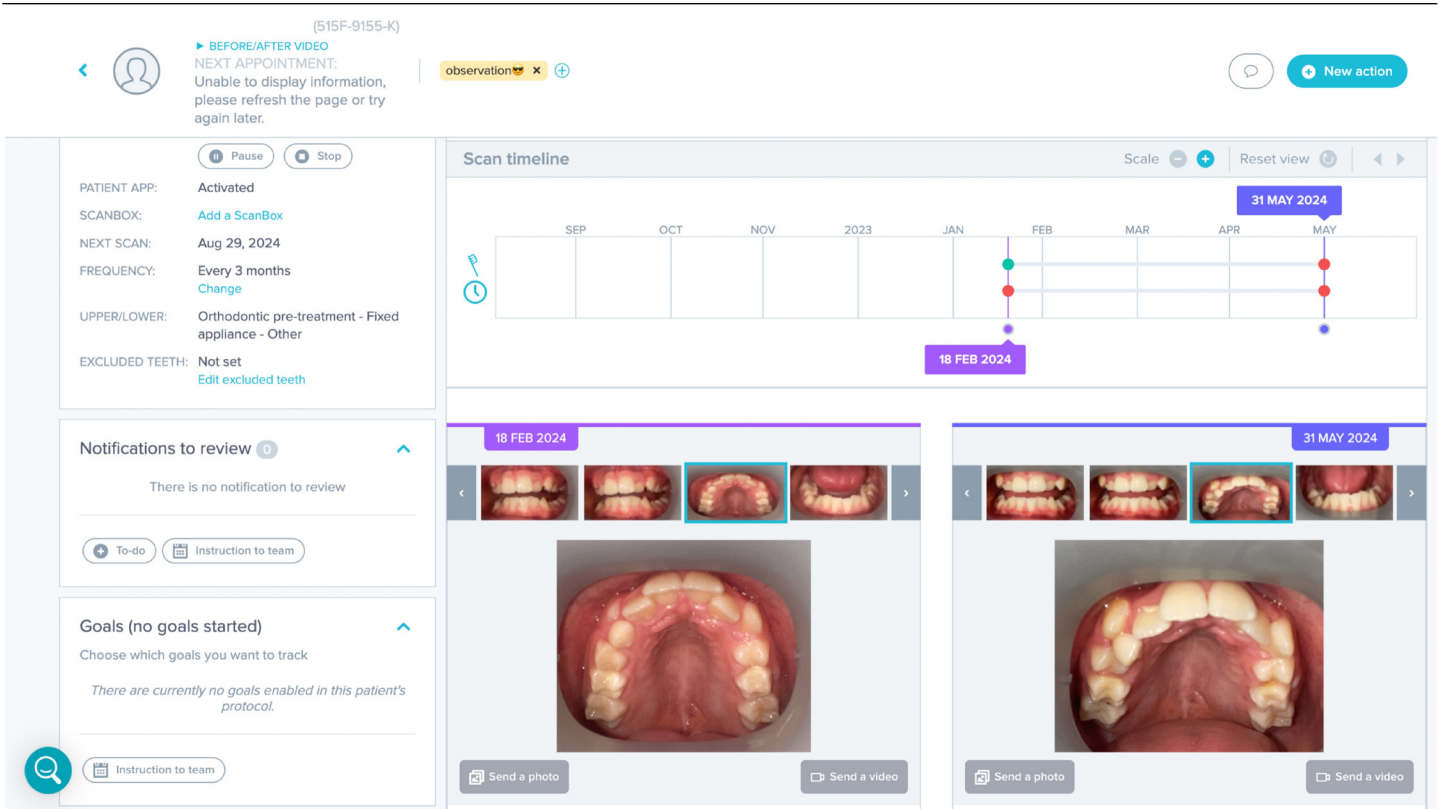


Figure 1 - Screenshot of the DM dashboard at initiation of the observation and monitoring protocol

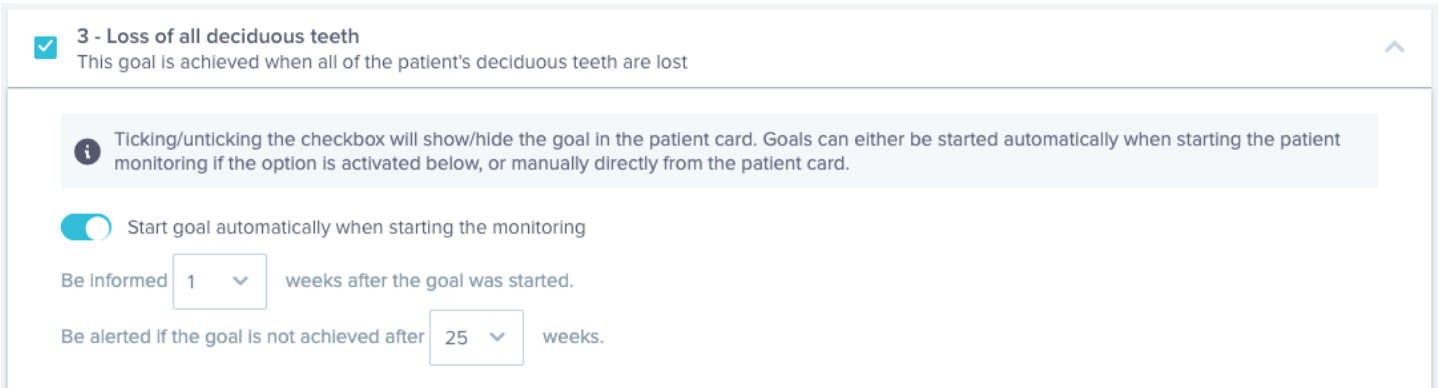


Figure 2 - Configuration of the “loss of all deciduous teeth” developmental goal in the DM platform

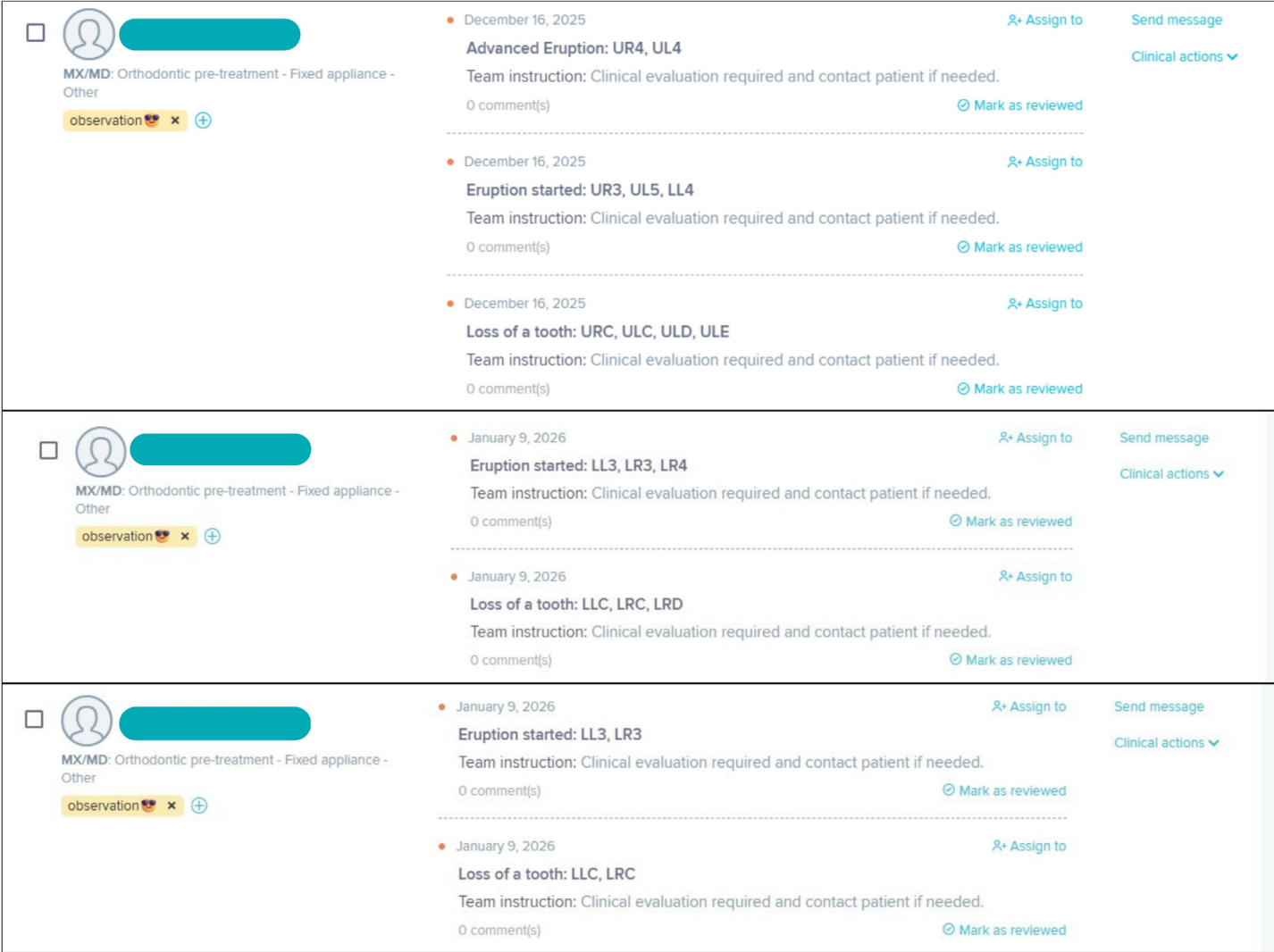


Figure 3 - Examples of automated alerts in the DM notification center triggered by developmental milestones

Communication

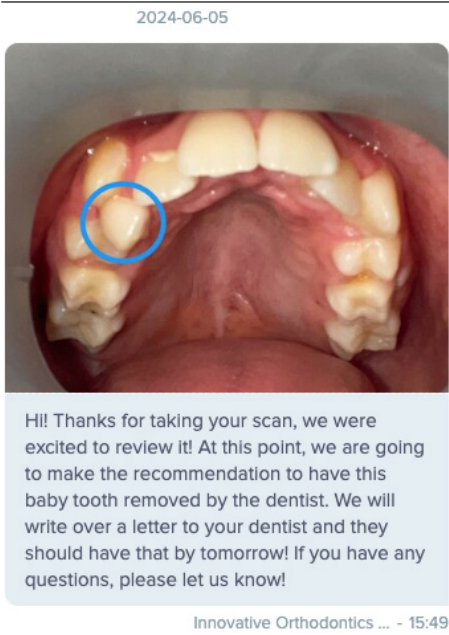


Figure 4 - Example of communication through the DM app following scan review, where a retained primary tooth is identified and a clinical recommendation is delivered directly through the platform.

Clinical Workflow in Practice: A Case Example

The clinical case below highlights how remote observation supports real clinical decision-making.

A 10-year-old patient presented in middle mixed dentition with upper and lower crowding, excessive overbite, and an ectopically erupting maxillary canine (Figure 5). Following clinical evaluation and panoramic imaging (Figure 6), the patient was referred for extraction of the primary canine and placed into an observation protocol.

Rather than scheduling multiple in-office observation visits, the patient was monitored remotely with DM scans every 90 days. This allowed the clinical team to:

- Track eruption changes over time
- Monitor post-extraction space development
- Identify readiness for treatment initiation

At 11 years of age, updated imaging and scan data confirmed appropriate timing for transition to an OBS-READY appointment (Figures 7-8), which in our office is done with a Treatment Coordinator to get treatment started. The patient was referred for additional primary tooth extractions and scheduled efficiently for the next phase of care—without unnecessary interim visits.

This case illustrates that remote observation enhances, rather than delays, clinical readiness decisions.



Figure 5 - Baseline extraoral and intraoral photographs at initial presentation.

Figure 6 - Baseline panoramic radiograph at initial presentation.



Figure 7 - Extraoral and intraoral photographs at the end of the observation and monitoring period

Figure 8 - Panoramic radiograph at the end of the observation period

Maintaining Engagement and Readiness Signals

One common concern with reducing in-office observation visits is loss of patient engagement. In practice, the opposite was observed. We leverage DM to drive excellent engagement through various actions such as:

- Personalized communication and coaching (Figure 9)
- Contest announcements (Figure 10)
- Light, non-clinical engagement messages, including humor and multimedia content (Figure 11)

For pediatric patients and families, this creates a sense of ongoing care and connection, even when physical visits are reduced. Observation patients remain visible to the practice, and readiness signals are identified promptly rather than waiting for the next scheduled recall.

Communication

We love giving you more reasons to smile,

The iOrtho Team

- 23:50

2025-03-10



Hey Carter! Thanks for taking your scan! We noticed some spots that could use a little extra focus with the brushing. Remember to brush 2-3 times a day and floss every night! I look forward to seeing your next scan- you got this!



Innovative Orthodontics ... - 16:29

2025-04-19

Figure 9 - Use of the image annotation feature to provide targeted oral hygiene guidance to the patient

Communication

Hello Brady,

- Great scan! This calls for a happy dance 🎉
🎵 <https://vimeo.com/753948553>

We love giving you more reasons to smile,

The iOrtho Team

- 13:54

2025-09-24

Hello Brady,

- Check out today's Dad Joke here:
<https://dbillsdmd.wistia.com/medias/m0pqcvc4nx>

We love giving you more reasons to smile,

The iOrtho Team

- 07:11

Figure 11 - Examples of automated, lighthearted messages, including humor and multimedia content, sent to sustain patient engagement between appointments.

Communication

2025-12-08

❄️✨ Want an EXTRA raffle ticket? ✨❄️

Do these two things:

- ✓ Stay up-to-date with your virtual scans
- ✓ Send us a winter-themed photo — it can be:

- 🧑‍🎨 a holiday decoration
- 🎨 a winter drawing you made
- 💡 some cool lights you saw
- 🍪 a winter treat you helped make
- 🌟 anything that reminds you of winter!

When you send your picture, you'll earn an extra ticket for our quarterly raffle (as long as your scan is up to date)! 🎉

🎁 Prize: A Family Max Membership to the Franklin Institute! 🏠🔬

Can't wait to see your winter creativity! ❄️💙

Innovative Orthodontics ... - 12:37

2025-12-12

Figure 10 - In-app contest announcement designed to drive patient engagement.

Operational Impact: Time, Capacity, and Economics

The operational implications of remote observation were immediate and measurable. Innovative Orthodontics currently manages over 3,000 patients in observation. Prior to implementing DM, these patients were typically seen twice per year, resulting in approximately 6,000 annual visits dedicated solely to observation (Figure 12).

By shifting to remote monitoring:

- Over 3,000 in-office observation visits were eliminated annually
- With an average of 65 appointments per clinical day, this equates to:
- ~46 full clinic days per year
- ~3.8 days per month of reclaimed capacity

From a financial perspective, each 20-minute observation visit represents an estimated \$142 in opportunity cost. Eliminating 3,000 such visits translates to approximately \$426,000 in recovered annual value, not as direct revenue replacement, but as capacity that can be redeployed toward higher-value clinical care.

Importantly, this capacity was not “lost”—it was reallocated to starts, active treatment visits, and improved schedule flexibility.

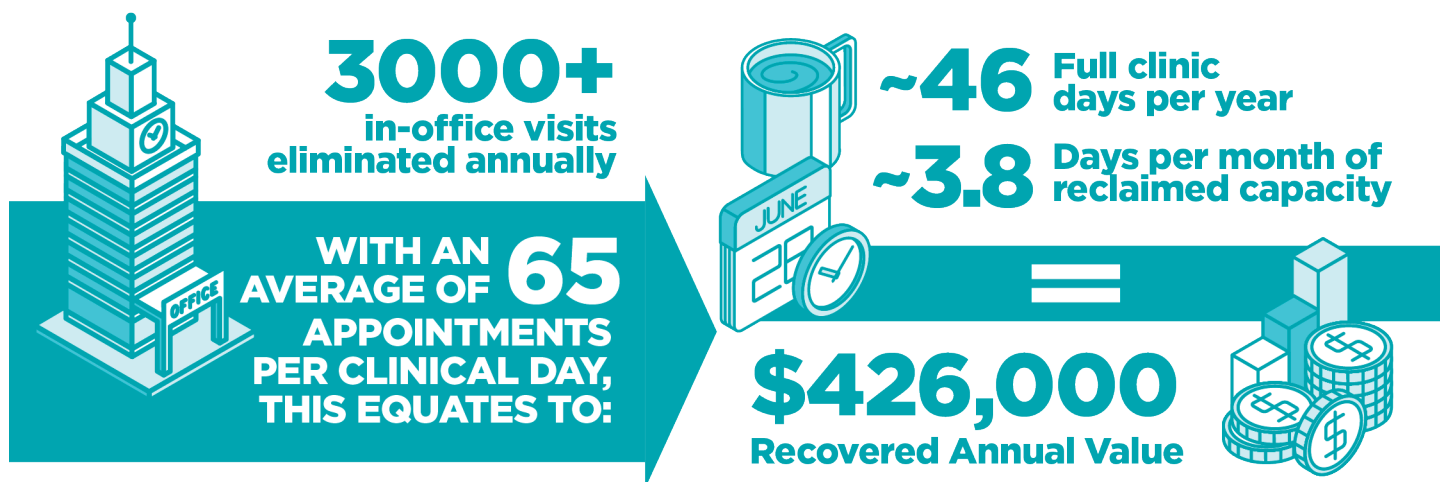


Figure 12 - Reclaimed clinical capacity and economic value enabled by DM

Implementation Snapshot

Practices interested in adopting a similar model should consider the following steps:

1. Identify and segment observation patients
2. Establish a standardized scan interval (e.g., every 90 days)
3. Define a single annual in-office checkpoint for radiographs
4. Utilize monitoring goals tied to developmental milestones
5. Train team members on observation-specific communication
6. Clearly explain the protocol to patients and parents

The success of remote observation depends less on technology alone and more on intentional workflow design.

Key Takeaways

Observation patients no longer need to be managed through inefficient, appointment-heavy workflows. Remote monitoring allows orthodontic practices to:

- Improve clinical oversight with more frequent evaluation
- Reduce unnecessary in-office visits
- Unlock meaningful schedule capacity
- Maintain strong patient engagement
- Make more precise treatment-timing decisions

At Innovative Orthodontics, integrating DM into observation care transformed a traditionally inefficient category into a streamlined, clinically robust system. Remote observation is not simply a convenience—it represents a more intentional and scalable standard of care.

