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Why Medical Device Return Programs Fail

Most device return schemes collect under 5% of eligible devices.
Here is where devices leak -- and what actually closes the loop.

The problem is not patient motivation. It is structural friction.
And the data gap is not a rounding error. It is the entire number.

FOR: **PSP Teams** **ESG Functions** **Regulatory Affairs**

#DeviceReturn	#PharmaESG	#EPR	#Scope3	#PSP

Clément Chabot -- Founder, Play4Health & Play for Earth
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1. THE QUESTION THE SYSTEM DOES NOT ASK

WHAT EVERY SYSTEM TRACKS:

→ Was the device prescribed?

→ Was it dispensed?

The care pathway ends at dispensing. What happens after is invisible.

WHAT NO SYSTEM CAPTURES:

→ Was the treatment completed?

Treatment completion cannot be seen from prescriptions or dispensing records. It has to be captured at the point of action -- a photo confirming dose completion, a scan confirming device return. Without that capture, the end of treatment is a blank.

Today, pharma sees the start of treatment. Play4Health makes the end visible.

2. KEY INSIGHTS

1 Most device return programmes collect less than 5% of eligible devices. The binding constraint is not patient willingness -- it is structural friction at the point of return.[1,2]

2 Device return failure is not a waste problem. It is a care pathway visibility problem. If a device is not returned, the system does not know whether the patient completed treatment, stopped early, or misused the device.[3]

3 The refill moment is the only point where device lifecycle, adherence behaviour, and care interaction intersect. Activating it requires a behavioural trigger embedded in care -- not a separate return programme.[4]

4 Programmes that embed device return into existing care touchpoints achieve return rates above 30%. Standalone return programmes reliably stay below 5%.[4,5]

3. THE SCALE OF THE RETURN GAP

< 5%	< 2%	80%+
of eligible devices returned through formal channels in most markets	formal inhaler return rate in the UK despite an active take-back scheme	of inhalers disposed of via general household waste or landfill
[1]	[2]	[2]

4. THE REAL PROBLEM: A BLIND SPOT IN THE CARE PATHWAY

Even in markets with active take-back schemes and years of campaign investment, formal device return rates remain stubbornly below 5%.[1,2] This is not execution failure. It is system failure.

If a device is not returned, the system does not know whether the patient completed treatment, stopped early, or misused the device. The return gap is a care pathway visibility gap.

> ***Device return failure is not a waste issue. It is a blind spot in the care pathway.***

5. THREE STRUCTURAL FAILURES

Three structural failures explain virtually all return programme underperformance:

1

WRONG BEHAVIOUR TARGET

Most programmes try to change patient motivation. The actual binding constraint is proximity and timing, not intent. Patients who want to return devices still do not, because the friction of correct disposal is higher than the friction of general household waste. Patients do not fail. The system fails to capture their behaviour.

2

WRONG INFRASTRUCTURE ASSUMPTION

Programmes built around dedicated return bins assume patients will make a separate trip. They will not. The return action must be embedded in a touchpoint the patient is already attending -- principally the refill visit. If it is not in the care flow, it does not exist.

3

WRONG DATA ARCHITECTURE

Even programmes that achieve meaningful return volumes rarely generate data sufficient for EPR compliance or Scope 3 Category 12 verification. Tonnage records do not attribute recovery to specific brands. And if you cannot prove adherence, you cannot defend the price to a payer. Attribution is the unsolved problem -- and regulators are closing in on it.

If a device is not returned, the system does not know where the treatment ended.

Tonnage is not data. It is accounting.

A PSP without end-of-treatment visibility is incomplete.

6. THE BEHAVIOURAL SCIENCE OF FRICTION

The friction of correct disposal must be lower than the friction of incorrect disposal for a behaviour to occur at population scale. In most markets, the reverse is true.

Each step toward correct device return -- storing the device, remembering it at the next pharmacy visit, handing it to a pharmacist who may not know the procedure -- is a friction point. Each friction point is a leak.

Default effects confirm that behaviour follows the path of least resistance unless a proximate trigger redirects it.[5] General household waste is the default. The programme must be easier than the bin -- not more convincing.

> ***"Patients do not lack the will. They lack the way. If returning a device is harder than throwing it in the bin, the bin wins every time."***

7. WHERE DEVICES LEAK: THE RETURN CHAIN

Device return failure is not random. It occurs at a predictable, repeatable set of structural leak points consistent across markets and programme designs.[2,3]

LEAK POINT	ROOT CAUSE	WHY PROGRAMMES MISS IT	THE STRUCTURAL FIX
Patient disposal moment	Device finishes away from pharmacy; no proximate collection point.	Campaigns target motivation. The gap is proximity and timing.	Embed return at the refill visit: patient brings finished device when collecting the new prescription.
Pharmacy handover	Pharmacist has no prompt, no system signal, no clear value for receiving returns.	Pharmacy treated as dispensing node only. Return potential never activated.	Link verified return volume to a pharmacy performance incentive. One scan confirms the event.
PSP agent visit	PSP coordinators focus on clinical outcomes; device return is outside mandate and KPIs.	Clinical and ESG objectives kept separate. PSP agents have no return data in their dashboard.	Add device return rate as a course completion metric on PSP territory dashboards.
Collection logistics	No scheduled pickup. Accumulated devices sit until someone organises collection.	Collection designed around pharmacy location, not patient touchpoint frequency.	Tie collection scheduling to verified return volume thresholds -- data-driven, not calendar-driven.
Data and attribution	No verified record of which devices were returned, by whom, through which channel.	No event-level data: no EPR attribution, no Scope 3 Category 12 verification, no audit trail.	Photo + barcode + GPS + timestamp at point of return: event-level records by brand, territory, actor.

8. WHAT WORKS: EMBEDDING RETURN INTO CARE

Programmes that achieve device return rates above 30% share one structural feature: the return action is embedded in a care touchpoint the patient is already attending.[4,5]

The refill moment is the only point where device lifecycle, adherence behaviour, and care interaction intersect. The patient is already at the pharmacy, already handling their device. The behavioural cost of return at this moment is close to zero.

One photo simultaneously closes the device lifecycle, signals treatment completion, and generates the event-level data that EPR compliance and Scope 3 Category 12 require.

> ***"A returned device is a verified signal that a treatment cycle has been completed. Not a waste event. Not an ESG metric. A clinical signal."***

HOW PLAY4HEALTH ACTIVATES THE REFILL MOMENT

Play4Health is the behavioral data layer that captures the refill moment as a verified clinical event. No new infrastructure. No dedicated audit programme. No separate patient journey.

1 — REFILL VISIT

Patient arrives at pharmacy to collect a new prescription. The finished device is already in hand. No additional trip. No separate motivation required.

2 — PHOTO + SCAN

Patient or pharmacist takes one photo of the finished device at the point of return. Barcode is scanned to record device ID, brand, and batch. Time and location captured automatically.

3 — AI VERIFICATION

The platform validates the image: device type confirmed, return condition assessed, event authenticated. Geo-coordinates and timestamp locked. No human review required.

4 — VERIFIED CLINICAL EVENT

A single, attributable event record is generated -- photo, barcode, GPS, timestamp. EPR-ready. CSRD / IFRS S2 compliant. ISAE 3000 audit architecture. The data feeds both ESG disclosure and PSP programme reporting simultaneously.

Patients generate the data themselves. A single photo at the refill visit creates a verified, attributable clinical event.

9. THE DUAL VALUE STREAM: CLINICAL FIRST

One field operation. Two institutional clients. The primary value is clinical. ESG compliance is powered by the same data -- it is not a separate programme.

PRIMARY VALUE: PSP & CLINICAL OPERATIONS	SECONDARY VALUE: ESG & COMPLIANCE
■ **Payer Defense Data:** verified device return as proof of course completion ■ Adherence quality signal for PSP programme evaluation ■ Real-world evidence for payer dossiers and market access ■ Territory coverage metrics for PSP manager dashboards ■ Real-time programme performance -- not annual proxy reports	■ **Audit-Proof Attribution:** Scope 3 Category 12 event records by brand and territory ■ EPR recovery data attributable to specific producers ■ CSRD / IFRS S2 audit trail ■ CDP supply chain disclosure data ■ Evidence under forthcoming EU device take-back provisions

10. THE VERIFICATION GAP: WHY TONNAGE REPORTS WILL NOT BE ENOUGH

Even in programmes that achieve meaningful return volumes, the data generated is rarely sufficient for EPR compliance or Scope 3 Category 12 verification. The verification gap is an attribution gap.

EPR regulators require recovery data attributable to specific producers. CSRD and IFRS S2 require Scope 3 data traceable to specific events, actors, and locations. Tonnage records satisfy neither requirement.

DATA SOURCE	WHAT IT CAPTURES	EPR ATTRIBUTION	SCOPE 3 VERIFICATION	CLINICAL VALUE
Pharmacy tonnage records	Weight collected per pharmacy per period	No -- cannot attribute to brand	No -- no event traceability	Zero
Contractor records	Pickup volumes per collection point	No -- mixed-brand accumulation	No -- no device identity	Zero
Patient self-report	Stated disposal behaviour	No -- unverified declaration	No -- not a verified event	Zero
Play4Health event records	Photo + barcode + GPS + timestamp per device per patient	Yes -- brand, territory, actor identified	Yes -- event-level Category 12	High -- adherence signal + course completion

11. THE REGULATORY DIRECTION OF TRAVEL

Regulators are converging on one requirement: attribution.

Tonnage is no longer sufficient. Regulators want to know which producer's devices were recovered, through which channel, verified by whom.

The EU Pharmaceutical Legislation Review mandates producer-attributed device recovery data.[6] France has introduced EPR obligations for medical devices. The UK Greener NHS programme has set inhaler sustainability targets requiring verified reporting.[2]

CSRD and IFRS S2 require verifiable, traceable data for material Scope 3 categories.[7,8] Device end-of-life is unambiguously material for device-heavy portfolios. Proxies will be discounted by auditors in the 2026-2027 mandatory reporting cycles.

The window is 2026-2027. Build the infrastructure now, or collect it retroactively later.

REGULATORY MILESTONES: DEVICE TAKE-BACK & SCOPE 3 VERIFICATION	
2023	→ UK Greener NHS inhaler sustainability targets published. → France introduces EPR obligations for medical devices.
2026 NOW	→ **CSRD (ESRS E1): first mandatory reporting cycle.** → **IFRS S2 voluntary adoption begins.** → **EU Pharma Legislation Review provisions entering into force.** → **Companies currently filing face these requirements.**
2027	→ CSRD mandatory scope expands to mid-size companies. → Attribution-level EPR reporting expected from large producers in key EU markets.
2028	→ Full event-level verification likely required for Category 12 EPR compliance across EU and UK. → Tonnage-only reports insufficient.

12. TWO OBJECTIONS -- AND WHY THEY MISS THE POINT

"Our pharmacy network is too fragmented to activate for device return."	"Our devices use low-GWP propellants. The emissions issue is already addressed."
The Play4Health activation protocol does not require system integration, dedicated hardware, or new contractual relationships. It requires one action from the patient (bring the finished device to the refill visit) and one from the pharmacist or patient (take a photo). The pharmacy receives a verified return count linked to a performance incentive. Independent pharmacies in comparable behaviourally embedded schemes have demonstrated activation rates above 60% when economic incentives are aligned and friction is minimised.[4]	Low-GWP propellants reduce the emission factor per device. They do not close the measurement gap. HFA-152a -- the leading low-GWP candidate -- still carries a global warming potential 138 times that of CO_2, and its release into the atmosphere is an inherent consequence of MDI use, not a disposal failure.[3] Changing the propellant is like switching to an electric car but still driving it into a lake -- a cleaner crash, but the vehicle is still lost. Under CSRD and IFRS S2, you still need to verify how many devices are actually recovered. The transition changes the emission coefficient. A lower emission factor does not substitute for an audit trail.[7,8]

13. PSP LENS: ONE INTERACTION, TWO INSTITUTIONAL CLIENTS

Device return programmes are typically funded by ESG. Patient Support Programmes are funded by market access. In most organisations, these teams do not share data, budgets, or reporting cycles. This separation is why device return programmes remain underfunded and disconnected from clinical workflows.

The structural resolution is a shared data infrastructure: one verified event record that serves both the ESG team (Scope 3 Category 12 and EPR compliance) and the PSP team (device return rate as a verified proxy for course completion and adherence quality). One action. Two budgets. One system.

Stop asking ESG for a handout. Start asking PSP for a partnership. One photo provides the compliance ESG needs and the clinical adherence signal PSP has been missing for years.

> ***"Device return rate is a proxy for course completion. The PSP team has always needed this data. They just did not have a verified source."***

14. GOVERNANCE AND INTEGRATION

No system replacement. Play4Health integrates with existing PSP management systems and pharma sales force automation platforms via flat-file export or standard APIs. Data flows into what already exists.

Governance is three-layer: patients and caregivers generate verified events at the point of action; territory PSP managers review and approve; ESG and market access teams receive aggregated, audit-ready reports with full data lineage. External assurance providers access the complete evidence trail -- raw photos, GPS logs, barcode records -- designed to meet ISAE 3000 standards.

The Health Adherence Index (HAI) runs on the same weighted formula structure as Play for Earth's Green Transformation Index (GTI), adapted for clinical dimensions: dose frequency, streak consistency, device return accuracy, and depth of therapeutic routine integration. One engine. Two applications.

CFO LENS

Scope 3 is now part of the financial disclosure perimeter. Building a verifiable behavioural dataset is a balance sheet risk management decision as much as an ESG one. Under CSRD and IFRS S1/S2, misstated or weakly supported Scope 3 figures translate into audit findings, restatement risk, and potential cost of capital impacts where investors discount unaudited estimates.

This is not an ESG programme. It is financial controls infrastructure.

CORE INSIGHTS	RECOMMENDATIONS	QUESTIONS TO ASK
✓ Device return failure is structural, not motivational -- friction is the binding constraint	→ Design device return around the refill visit, not as a separate programme or location	? What is your current device return rate, and how is it verified?
✓ The refill moment is the highest-leverage return trigger at zero additional friction	→ Build photo verification into the pharmacy dispensing workflow from day one	? At what point does the finished device most frequently enter general household waste?
✓ A returned device is a verified signal of treatment completion -- clinical first, ESG second	→ Generate event-level return data -- tonnage reports will not satisfy forthcoming EPR attribution requirements	? If audited today on Scope 3 Category 12, what is the confidence score of your underlying data?
✓ Two institutional clients -- ESG and PSP -- mean two budget lines for one field operation	→ Present jointly to ESG and PSP budget owners -- this is shared infrastructure, not an ESG cost	? Which regulator, investor, or payer is most likely to challenge your device end-of-life data in the next 18 months?

SOURCES AND REFERENCES

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COMING NEXT: FICHE 03/10

The Patient as Data Actor -- Patients generate the most valuable sustainability data in the pharma value chain. The next fiche maps how patient-generated verification changes the ESG data architecture -- and why it is more defensible than any proxy model.