PHTI and ICHOM: Optimizing Digital Health Performance-based Contracts for Patient Outcomes

Recording available here: PHTI and ICHOM: Optimizing Digital Health Performance-based Contracts for Patient Outcomes

1. How to correlate cost to measured outcomes and create contracts with insurance companies? We suggest that implementers start with a defined episode or population, then pair total cost of care with a small set of agreed outcomes (ideally based on the relevant ICHOM Set): clinical outcomes, PROMs, utilization, complications, adherence, and equity/access measures. Contracts should include baseline performance, target improvement, attribution rules, risk adjustment, data-sharing requirements, and a withhold/shared-savings mechanism. The ICHOM lens is: do not pay only for activity — pay for improvement in outcomes that matter to patients.

2. What role does patient adherence play in outcome-based contracts and what practical examples exist for measuring it? Patients who are involved in the care conversation and actively engage with their treatment plan may be more likely to be adherent. Implementers have found that adherence matters because outcomes may be affected by whether patients received or were able to use the intervention. Improving adherence can, in some cases, improve outcomes with no other changes to practice required. Practical measures for assessing adherence include medication possession ratio, refill data, device use, appointment attendance, PROM completion, app engagement, home BP/glucose uploads, rehab completion, or care plan milestones. It can also be helpful to measure patient engagement in treatment selection. Example: in diabetes, HbA1c improvement should be interpreted alongside medication adherence, CGM/BGM engagement, lifestyle coaching participation, and follow-up completion.

3. How do you adjust for risk (e.g., comorbidities, smoking, anxiety)? Consider how you are planning to use case-mix adjustment before comparing providers or tying payment to results, as well as whether stratifying the population (i.e. identifying potential effect modifiers before doing the comparison) is appropriate or necessary. Relevant risk modifiers may include baseline severity, age, socioeconomic status where appropriate, comorbidities, smoking, mental health status, baseline PROMs, and disease stage. ICHOM Sets explicitly include risk factors and baseline conditions to support fair comparison as case-mix variables.

4. How are you involving or integrating laboratory operations (clinical or molecular)? When implementing ICHOM Sets, both clinical outcomes and patient-reported outcomes are collected. Therefore, laboratory-based tests that are required for clinical outcomes should be treated as core infrastructure, not a side function. Clinical labs support clinical outcomes like HbA1c, LDL, eGFR, inflammatory markers, pathology results, and safety monitoring. Molecular labs can support stratification, eligibility, precision treatment, or recurrence monitoring. The key is connecting lab data into the contract dashboard, not leaving it in a separate operational silo.

5. How are you integrating patient-reported measures into service delivery and contract performance? Recommended timelines for outcome collection are specified in the ICHOM Set. In most cases, PROMs should be collected at baseline and at defined follow-up points, then used in two ways: for clinical care and for contract evaluation. For care, they may trigger outreach, escalation, shared decision-making, or triage. For contracts, they show whether patients actually feel/function better — not just whether claims costs fell. It is important to consider what impact the measures will have on both clinical performance and contract performance prior to developing the service (and contract), so that these impacts are measured appropriately and consistently (Katz G et al., NEJM Catalyst, Vol. 7 No. 5, May 2026. DOI: 10.1056/CAT.25.0467).

6. Are clinicians reluctant to change from fee-for-service contracts to DHPB/outcome-based contracts? How can they be convinced? This can be a challenge that implementers face. Common reactions include: "Will I be punished for sicker patients?", "Will this add admin burden?", "Will I lose income?", and "Are the measures fair?" Some clinical teams may have such concerns. In the experience we facilitate globally, the best practice is to engage clinicians early in understanding the purpose of measurement, and to start small, using use clinician-approved measures (like ICHOM Sets). Additional factors for success include implementing appropriate risk-adjustment, creating and sharing data via dashboards, avoid punitive (ie payment penalty) first-year models, and sharing upside when outcomes improve. It can also be useful to identify a specific clinician who is enthusiastic about this model to act as a clinical champion to engage their peers within the service.

7. How can we leverage the CMS ACCESS Model as an impetus to drive provider buy-in? ACCESS is useful because it gives providers and all actors in the U.S. healthcare ecosystem a federal signal that payment for tech-enabled chronic care is evolving to pay-for-outcomes alignment. . CMS says ACCESS will test outcome-aligned payments in Original Medicare for chronic conditions including high blood pressure, diabetes, chronic MSK pain, and depression. It can be framed as: "This is no longer theoretical — CMS is building payment infrastructure around measurable outcomes." ICHOM Sets - which cover the conditions emphasized in ACCESS - are implementation-ready tools that can be used to meet this model.

8. How successful have pay-for-performance models been globally? Pay for performance models are not a new concept, and yet results remain mixed due to lack of data transparency, comparability, and scale. Such models can improve documentation, process reliability, and some targeted outcomes, but they often underperform when measures are too narrow or focus on processes vs. outcomes, incentives are weak, risk adjustment is poor, or clinicians see them as bureaucratic and not valuable to the clinical engagement with patients. The strongest models combine outcomes, patient experience, clinical quality, cost, equity, and continuous improvement — not just bonuses for hitting isolated metrics.

9. How can I get more information on the Cataract Set? ICHOM has a completed Cataracts Set focused on outcomes that matter most to cataract patients. It includes clinical outcomes and patient-reported visual function; the reference guide and resources can be downloaded from the ICHOM website (https://www.ichom.org/patient-centered-outcome-measure/cataracts/).

10. Is there an outcome set for respiratory disease and sleep disorders? ICHOM does not currently have one broad "respiratory and sleep disorders" Set in the same way it has Cataracts. ICHOM is strongly invested in developing the Respiratory segment of the Set Library, including COPD, asthma, and/or sleep-related conditions and welcomes support from funders, patients, clinicians, and researchers. To join us in creating this work, please contact j.delgado@ichom.org.

11. How can regulators ensure that PROM-based and bundled payment models are objectively defined, supervised, and fairly reflected? Regulators should require transparent measure definitions, public methodology, risk adjustment, independent validation, auditability, patient representation, anti-gaming safeguards, and appeal processes. PROM-based payment should not punish providers serving complex populations. ICHOM can support both regulators and HTA bodies to identify interventions that offer the most value to patients, and by extension, value to the entire health-care system.

12. Examples of payment models for chronic disease.

    - Diabetes: pay for HbA1c improvement, complication reduction, PROMs, medication adherence, and total cost trends. (Diabeter case study https://catalyst.nejm.org/doi/full/10.1056/CAT.24.0487)
    - Hypertension: pay for sustained BP control, medication adherence, home monitoring, and reduced ED events.
    - Depression/anxiety: pay for symptom improvement, access, engagement, and functional improvement.
    - MSK: pay for pain/function improvement, avoided unnecessary imaging/surgery/outpatient appointments, and return to activity. (BCCG case study https://ichom.org/files/case-studies/ICHOM-Bedfordshire-Case-Study.pdf)

14. Advocacy in youth mental health (Mental Health America): Who is representing young people and how is their voice heard? Young people should be represented through youth advisory councils, patient advocates, lived-experience panels, family/caregiver input, school community partners, and compensated participation. See the link to MHA's Young Leaders council: https://mhanational.org/youth-leadership/ The ICHOM principle is simple: no outcome set for youth mental health should be defined without youth voice. We aim for at least 30% of our Working Groups membership to be patients or patient advocates, which is particularly important when a condition affects young people.

15. Results shown to date. The best results tend to show improved measurement discipline, clearer accountability, and better care redesign. Hard financial savings are more variable and depend heavily on population size, attribution, data quality, and whether the model changes care — not just payment.

16. How can we improve health services in clusters with low budgets? Start with a minimum viable outcomes program: 5–10 measures, a simple registry, low-cost PROM tools, basic risk factors, monthly review meetings, and one improvement priority per quarter. Do not overbuild. (CAIpaDI case study, comprehensive diabetes centre in Mexico https://www.ichom.org/wp-content/uploads/2024/04/ICHOM_CAIPaDI_Case_study.pdf).

17. Practical utilization in the NHS (or a similar tax-based system). In the NHS or similar systems, the use case is less "payer contract" and more commissioning, pathway redesign, benchmarking, waiting-list prioritization, and quality improvement. Outcomes can help decide which services deliver the most patient value per pound spent. (BCCG case study https://ichom.org/files/case-studies/ICHOM-Bedfordshire-Case-Study.pdf).

18. List of important measures. Use a balanced set: survival/complications, disease control, functional status, symptoms, quality of life, patient experience, adherence, utilization, equity, and total cost of care. Balancing clinical and patient-reported outcomes is a key element of the development of ICHOM Sets, which provide a fundamental starting place for assessing relevant measures. The PHTI toolkit is also a valuable resource for guidance on measures for contracting.

19. How to add new programs. Pick a condition with burden, variation, measurable outcomes, stakeholder interest, and implementation feasibility. Then convene patients, clinicians, researchers, payers, and implementers; define the minimum measure set (ideally based on an ICHOM Set); pilot it; build the data flow; and only then tie it to payment. If you need further guidance on implementation, please contact us to find out more about ICHOM's CORE Advisory services at info@ichom.org.

20. How do you recruit patients with lived experience? (PHTI)

    From an ICHOM perspective, we ensure that at least 20%, and ideally 30%, of our Working Groups are patients with lived experience and patient representatives. We also engage with patient groups through our Patient Partner Alliance.

    For each assessment, PHTI conducts individual in-depth interviews with patients who have experience using virtual solutions to manage their condition. Patients are recruited for diversity across age, gender, race, ethnicity, income level, geography, and insurance type.

21. Can you say more about where the $600k saving came from in the Bedfordshire NHS example, and the specific role of ICHOM's Set in this? This was a case study developed with ICHOM (https://ichom.org/files/case-studies/ICHOM-Bedfordshire-Case-Study.pdf), as well as publicly available materials (https://bedfordshirelutonandmiltonkeynes.icb.nhs.uk/our-publications/archive/beds-ccg-board-papers/2017/04-may-2017/10-0-msk/?layout=file). Many of the savings came from reducing outpatient appointments and surgeries (where these were not necessary).

22. Is engagement not a measure of process rather than an outcome?

    This may depend on context - engagement may be a key part of an outcome (for example, therapeutic engagement in terms of mental health conditions), or it may be a process measure (for example, assessment of stakeholder commitment levels, patient activation).

    Please visit https://phti.org/research-insight/performance-based-contracting/ to learn more about engagement criteria as part of key contracting decisions.

23. How does the use of outcome measures change the relationship between patients and care providers? There has been a lot of talk about clinicians taking on more of a coaching role. This particularly makes sense for chronic conditions, given that patients and their families and their behavior will have a stronger influence on outcomes than clinical intervention.

    This could be an excellent example of where the simple act of measuring outcomes could have a beneficial effect on those outcomes. Enhancing the patient voice and decision-making capability could lead to more optimum choices that deliver what an individual patient prioritises for their own care (Damman OC et al. (2019), The use of PROMs and shared decision-making in medical encounters); Yun H, Woo KS, Lee DY, Yoo SH. A systematic review of the effects of shared decision-making in the South Korean healthcare system. Front Public Health. 2026 Jan 5;13:1667803. doi: 10.3389/fpubh.2025.1667803.

24. How can we more effectively engage providers in an outcomes-based approach, particularly in Latin America, where many public health systems are strained and clinicians face high patient volumes and burnout? In these settings, success is often measured by the number of patients treated rather than by quality or outcomes. What strategies can we use to motivate and support both frontline providers and decision-makers to prioritize quality of care and patient outcomes alongside productivity?

Moving from a fee-for-service or volume model to a value-based healthcare model can be very challenging. It can be very important to get early stakeholder buy-in at multiple levels (finance teams, key clinicians, and frontline providers) who are willing to explore novel ways of delivering services and receiving funding in order to deliver the most value for care. It often requires a multi-pronged approach in order to succeed, with strong coalitions required to facilitate networking (particularly to leverage local resources), academic research, engagement with clinical and provider societies working in this space and industry collaborations. These activities accelerate both local and more wide-spread momentum and knowledge transfer.

25. How can we better demonstrate the importance of capturing accurate and reliable data, particularly in public health systems where data collection is often a significant challenge due to limited resources, time constraints, and competing priorities? What approaches can help reinforce the value of data for improving quality of care and decision-making?

    It may be useful to refer to previous ICHOM case studies (https://www.ichom.org/case-studies/) to demonstrate the impact of measuring outcomes on both health outcomes and resource use. Ensuring that incentives are aligned within the whole service (from finance teams to clinical delivery) can ensure that a sustainable data infrastructure can be created.

26. How do you incorporate the social determinants of health outcomes?

    ICHOM Sets include case-mix variables, which include important social determinants of health in order to provide accurate risk adjustment. There is an opportunity for wider engagement in this area, and previous ICHOM Sets (such as Overall Adult Health https://www.ichom.org/patient-centered-outcome-measure/overall-adult-health/) and conference papers and presentations have focussed on this area (https://conference.ichom.org/wp-content/uploads/2025/01/Abstract-17.pdf;

27. How can we strengthen accountability within contractual agreements, particularly in contexts where providers may attribute unmet targets to factors such as low patient attendance or adherence? What mechanisms can we implement to ensure a balanced approach that recognizes systemic challenges while still holding providers accountable for quality, follow-up, and continuity of care?

    Developing this type of contract is much more straightforward when there is stakeholder buy-in, rather than being imposed as a top-down policy shift. Creating an environment of willingness-to-try can be crucial in successful implementation. In addition, careful consideration around case-mix variables used for risk-adjustment can be important in ensuring there are no unwarranted variations in payments (e.g. cherry-picking 'easy' cases). Deciding a priori what stratification of the population would ensure balance can be one way to approach this.

    For more information, please visit https://phti.org/research-insight/performance-based-contracting/ to access PHTI's Performance-Based Contracting Playbook and Toolkits.

28. How do you ensure contracting reflects outcome impact in diseases wherein PROs and CROs correlate incompletely, or even poorly? Are there scenarios that specifically include compensation based upon the pace at which ineffective treatments are recognized by lack of PRO improvement and changed?

    ICHOM does not advocate for basing contracting on inappropriate outcomes (e.g. surrogate outcomes that do not have a direct correlation to or impact on final outcomes, e.g. progression-free survival to overall survival in some types of tumours). If there are no suitable PROs and CROs that can be measured on an interim basis, then either final outcomes will need to be measured, or alternatively, you may wish to explore a wider constellation of outcomes to see if there are any combinations (rather than individual outcomes) that provide insight into the final outcomes of interest.