The Commissioning Intelligence Model

Types of Services
- S8.01: Demographic forecasting & disease trends. (Provenance: AF)
- S8.04: Forecasting and future projections of expected activity. (Provenance: HB)
- S8.05: Cost Benefits analysis of current activity vs. alternatives (Provenance: HB)
- S8.06: Strategic secondary analysis of 'How Healthy' and 'How much?' (Provenance: HB)
- S8.07: Track and react to patient expectation (Provenance: HB)
- S8.08: Manage Programme Portfolio (Provenance: HB)
- S8.09: Programme budgeting (comparative spend on disease conditions) (Provenance: CH181011)

Tools/Data
- D8.01: Programme budgeting (comparative spend on disease conditions) & marginal analysis, PBMA Atlas, SPOT, SHAPE (Provenance: AF)
- D8.02: Health investment packs, QIPP (Provenance: HB)
- D8.03: Pathway modelling inc ROI calculators, return on investment tools (Provenance: HB)
- D8.04: Results and secondary analysis of other questions, design making support etc (Provenance: HB)
- D8.05: Quality of life & well being measures e.g. QALYs (Provenance: CH181011)
- D8.06: DH Programme Budgeting tool / Spend and Outcome Tool (Provenance: CH181011)
- D8.07: Patient expectation information (Provenance: CH181011)

Types of Services
- S1.01: Health needs / Joint Strategic Needs Assessment/ Impact assessments (data & analytical input) (Provenance: AF/WS290911)
- S1.02: Risk profiling & prediction. (Provenance: AF)
- S1.03: Demographic forecasting & disease trends. (Provenance: AF)
- S1.05: Geographic analysis and mapping, socio-demographic analysis. (Provenance: AF)
- S1.06: Identification of at-risk groups (e.g. Communities (inc Travellers), Carers etc) (Provenance: AF)
- S1.07: Informing the public about keeping healthy, prevention resources (Provenance: AF/WS290911)
- S1.08: Research, surveys, audits, peer reviews (Provenance: HB/WS290911)
- S1.09: Managing needs of Stakeholders (e.g. Care Home, Community, Health Education) (Provenance: WS290911)

Tools/Data
- D1.01: Population, migration, birth, mortality and morbidity statistics and projections (ONS, Exeter, QOF, Primary Care, SUS, Prevalence modelling tools, Census) (Provenance: AF/WS290911)
- D1.02: Public Health Data Observatory / Local Information Systems / JSNA / Cancer Registry / Qualitative Data inc Voluntary & Third sector (Provenance: AF/HBWS290911)
- D1.03: Risk Stratification tools and models: Patients at Risk of Readmission (PARR), Combined Predictive Model, Adjusted Clinical Groups. (Provenance: AF/WS290911)
- D1.04: Socio-demographic classification system (e.g. Mosaic, Health foundations - DH segmentation tool). (Provenance: AF/WS290911)
- D1.05: Mapping and geo-spatial software (Provenance: AF)
- D1.06: Deprivation indices (Index of Multiple Deprivation). (Provenance: AF)
- D1.07: Access to and familiarity with wide range of Public Health data sources, Benchmarking and comparison tools (e.g. NHS Atlas of Variation, NCHOD, Local tools). (Provenance: CH181011)
- D1.08: Dynamic ethnicity data analysis across all aspects of care. Wider equality indicators including disability, sexual orientation etc (Provenance: CH181011)
- D1.09: Data on wider determinants, social service, HPA (Provenance: HB)
- D1.10: Predictive disease monitoring (Provenance: WS270911)

Types of Services
- S7.01: Programme and project monitoring. (Provenance: AF)
- S7.02: Providing comparative cost and activity monitoring (Provenance: AF)
- S7.03: Metrics reporting. (Provenance: AF)
- S7.04: Performance reporting. (Provenance: AF)
- S7.05: Providing comparative outcome monitoring inc Patient and Public Data (Provenance: AF)
- S7.06: Production of Board level reports, presentations and profiles (Provenance: CH181011)

Tools/Data
- D7.01: Performance & Public Health metrics, frameworks and dashboards (Provenance: AF)
- D7.02: Activity & cost baseline and tracking data (Provenance: AF)
- D7.03: Impact analysis & evaluation using statistical tools (Provenance: AF)
- D7.05: Public Health Observatory tools including survey tools (Provenance: AF)
- D7.06: Data outputs from all other dimensions (as appropriate) (Provenance: CH181011)
- D7.07: Data required for Programme Gov inc Benefits Mgmt, Plans etc (Provenance: CH181011)
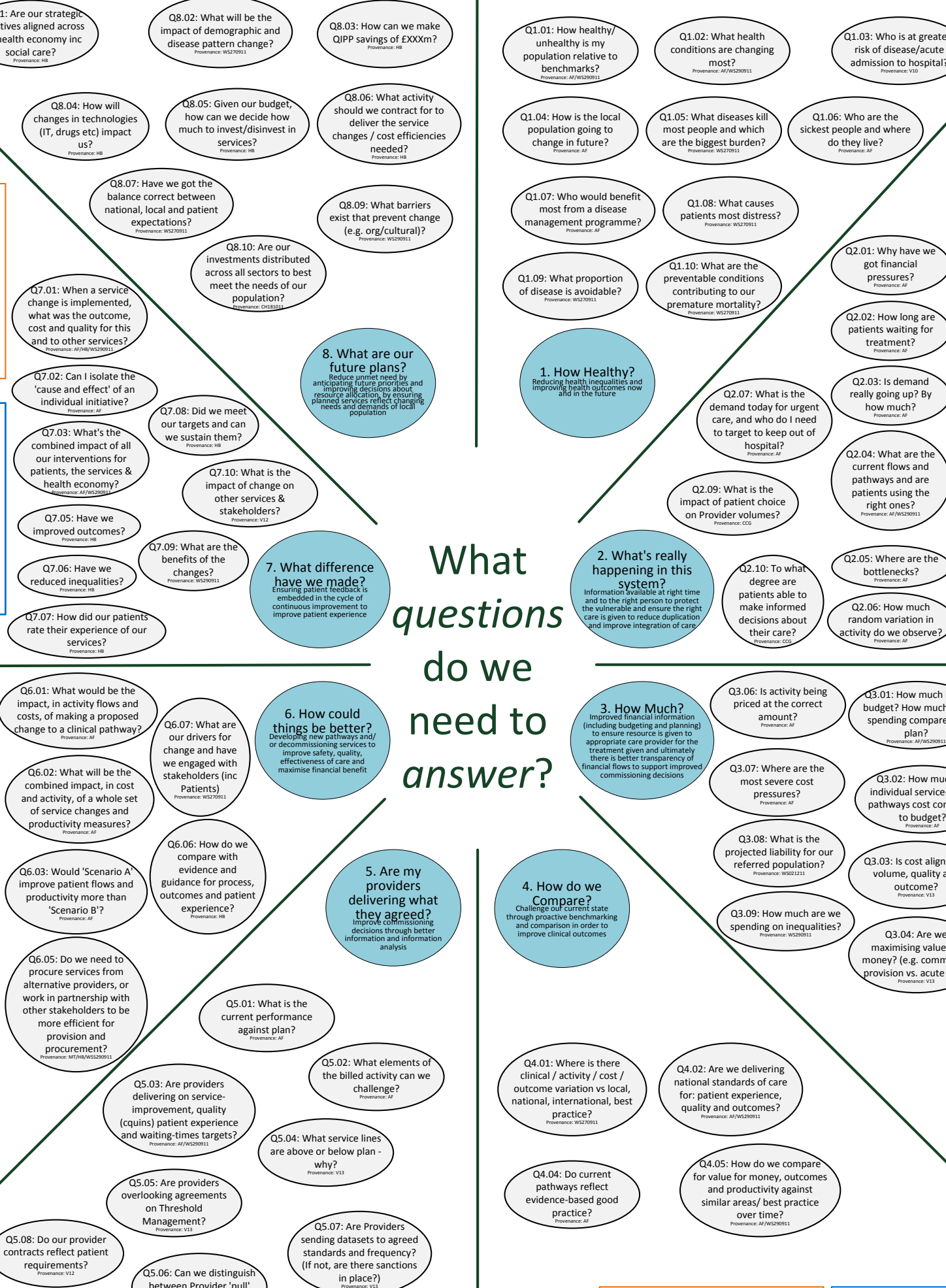
Types of Services
- S2.01: Trend and statistical analysis (activity, cost, SPC) (Provenance: AF)
- S2.02: Capacity and demand analysis, patient flow modelling, waiting times analysis (Provenance: AF)
- S2.05: Analytics support to Clinical audit. (Provenance: AF)
- S2.07: Provide access to patient medical records (Provenance: HB)
- S2.09: Indicators to track progress throughout pathways reasons/decisions for referrals, patient experience and outcomes (Provenance: WS270911)
- S2.12: Management of Urgent Care Monitoring/ Dashboards (Provenance: CH181011)
- S2.13: Track patient experience (Provenance: CH181011)

Tools/Data
- D2.01: Near/real time information - activity & financial for A&E, OOHs, MIU, Acute and Community Admissions etc (Provenance: CH181011)
- D2.02: SUS data, including acute activity & costs, referrals with clinical reason, CAB, 'Patient-Journey' analysis. (Provenance: AF)
- D2.03: Current, historic and planned Provider Activity and Cost data-sets (SUS & Local Contract Mgmt Systems e.g. Maternity, Mental Health, Local Auth etc) (Provenance: V10)
- D2.05: Waiting times/list data (Provenance: AF)
- D2.06: Patient level datasets with updates inc: decisions made in secondary care – reasons for treatment/changes/referrals/delays /test results and outcomes (Provenance: AF)
- D2.07: External Sources such as Social Media (Provenance: WS021211)

Types of Services
- S6.01: Pathway & scenario modelling (inc Audit of Admission thresholds and service structure) (Provenance: AF)
- S6.02: Contract modelling (Provenance: AF)
- S6.03: System-wide activity & cost modelling (Provenance: AF)
- S6.06: Review evidence base (e.g. National Comparators, NICE, etc) (Provenance: V13)
- S6.07: Capture & manage stakeholder feedback/outcomes (Provenance: WS290911)
- S6.08: Clinical governance and complaints handling (Provenance: V10)

Tools/Data
- D6.01: Pathway data (Provenance: AF)
- D6.02: Contract activity and cost (Provenance: AF/HB)
- D6.03: Forecast analysis and planning projections (Provenance: AF)
- D6.04: Service structure audit and improvement support. (Provenance: AF/HB)
- D6.05: Prescribing decision support data (Provenance: HB)
- D6.06: Capture & processing of patient experience and outcomes throughout pathways, inc PROMS (Provenance: WS270911)
- D6.07: Data outputs from all other dimensions (as appropriate) (Provenance: CH181011)
- D6.08: Stakeholder feedback including external sources such as Social Media and Public Enquiries (Provenance: V10)
- D6.09: Staff surveys, appraisals, complaints, incidents and SUIs (Provenance: V10)
- D6.10: External information e.g. Market intelligence (Provenance: V13)

Types of Services
- S3.01: Service-level costing (e.g. by Specialty, HRG chapter, Diagnostic chapter) (Provenance: AF)
- S3.02: Budget planning, development & forecasting (Provenance: AF/WS290911)
- S3.03: Budget Reporting & Variance analysis (Provenance: AF)
- S3.04: Price verification (provider costings) & reconciliation to contract, automated invoice validation (Provenance: AF/CESG)
- S3.05: Comparative Provider cost analysis (Provenance: AF)

Tools/Data
- D3.01: SUS reporting & analysis web-service, including Budget reports. (Provenance: V10)
- D3.02: Current and historic Provider Activity and Cost data-sets (SUS & Local Contract Mgmt systems) (Provenance: AF)
- D3.03: Tariff / Pricing tables, PBR rules and algorithms (local and national), Prescribing costs (Provenance: CH181011)
- D3.05: Robust timely referral activity (Provenance: WS290911)
- D3.06: Referral templates with expected costs (Provenance: CH181011)
- D3.07: Reference Cost Data (Provenance: CH181011)

Types of Services
- S5.01: Analytical support to Contract monitoring & analysis (Provenance: AF)
- S5.02: Provider activity validation & Data Quality review (Provenance: AF)
- S5.03: Invoice validation, challenge (Provenance: CH181011)
- S5.04: Provider level-analysis of 'how much' and 'how good'? (Provenance: AF)
- S5.05: Contract development (Provenance: MT)
- S5.06: Performance Management and support for service improvement (inc Negative impacts and Data Management) (Provenance: MT)
- S5.07: Utilisation reviews, PbR Audits, Clinical Decision Support (Provenance: AF)
- S5.08: Basic budget reporting (Provenance: CH181011)
- S5.09: Contract validation, challenge (Provenance: CH181011)
- S5.10: SUS validation with GP Practice Systems (Provenance: CH181011)

Tools/Data
- D5.01: Data warehouse integration and reconciliation of Activity/Cost and Provider contracting reports (Provenance: AF)
- D5.02: Contract Monitoring reporting by Provider (Provenance: CH181011)
- D5.05: LA, Primary care and Voluntary/third sector (Provenance: WS270911)
- D5.06: Referral Data (Provenance: CH181011)
- D5.07: CQUINS (Provenance: CH181011)
- D5.08: Insight into provider sustainability (Provenance: V13)
- D5.09: Patient Feedback (Provenance: V12)

Types of Services
- S4.01: Practice level, regional, and national benchmarking of disease prevalence, activity, productivity and costs. (Provenance: AF)
- S4.02: Analysis and presentation of productivity indicators by programme / project. (Provenance: AF)
- S4.03: Clinical Pathway mapping and modelling and cost comparators (Provenance: AF/ WS290911)
- S4.04: Providing evidence and information on comparative health outcomes. (Provenance: AF/WS290911)
- S4.05: Statistical analysis of variation and correlations e.g. Statistical Process Control (Provenance: CH181011)

Tools/Data
- D4.01: Age-sex-deprivation standardised comparative data at Practice level for commissioned activity (inc practice specialism). (Provenance: AF)
- D4.02: Primary Care data extracts providing integrated analysis with Acute activity, e.g. prevalence rates vs. Admissions. (Provenance: AF)
- D4.03: Comparative benchmarking tools (e.g. QOF Data sets, NHS Comparators, NHS Atlas of Variation, Better Care Better Value indicators). (Provenance: CH181011)
- D4.05: Benchmarked GP referrals analysis. (Provenance: AF/HB)
- D4.06: Practice profiles (Needing national standards) (Provenance: V13)
- D4.07: National Guidance, PROMS, Utilisation reviews (Provenance: CH181011)

What *questions* do we need to *answer*?

8. What are our future plans?
Reduce unmet need by anticipating future priorities and improving decisions about resource allocation, by ensuring planned services reflect changing needs and demands of local population

- Q8.01: Are our strategic objectives aligned across the health economy inc social care? (Provenance: HB)
- Q8.02: What will be the impact of demographic and disease pattern change? (Provenance: WS270911)
- Q8.03: How can we make QIPP savings of £XXXm? (Provenance: AF)
- Q8.04: How will changes in technologies (IT, drugs etc) impact us? (Provenance: HB)
- Q8.05: Given our budget, how can we decide how much to invest/disinvest in services? (Provenance: HB)
- Q8.06: What activity should we contract for to deliver the service changes / cost efficiencies needed? (Provenance: HB)
- Q8.07: Have we got the balance correct between national, local and patient expectations? (Provenance: WS270911)
- Q8.09: What barriers exist that prevent change (e.g. org/cultural)? (Provenance: HB)
- Q8.10: Are our investments distributed across all sectors to best meet the needs of our population? (Provenance: AF/WS290911)

1. How Healthy?
Reducing health inequalities and improving health outcomes now and in the future

- Q1.01: How healthy/ unhealthy is my population relative to benchmarks? (Provenance: AF/WS290911)
- Q1.02: What health conditions are changing most? (Provenance: AF/WS290911)
- Q1.03: Who is at greatest risk of disease/acute admission to hospital? (Provenance: V10)
- Q1.04: How is the local population going to change in future? (Provenance: AF)
- Q1.05: What diseases kill most people and which are the biggest burden? (Provenance: WS270911)
- Q1.06: Who are the sickest people and where do they live? (Provenance: AF)
- Q1.07: Who would benefit most from a disease management programme? (Provenance: AF)
- Q1.08: What causes patients most distress? (Provenance: WS270911)
- Q1.09: What proportion of disease is avoidable? (Provenance: WS270911)
- Q1.10: What are the preventable conditions contributing to our premature mortality? (Provenance: AF)

7. What difference have we made?
Ensuring patient feedback is embedded in the cycle of continuous improvement to improve patient experience

- Q7.01: When a service change is implemented, what was the outcome, cost and quality for this and to other services? (Provenance: AF/HB/WS290911)
- Q7.02: Can I isolate the 'cause and effect' of an individual initiative? (Provenance: AF)
- Q7.03: What's the combined impact of all our interventions for patients, the services & health economy? (Provenance: AF)
- Q7.05: Have we improved outcomes? (Provenance: AF)
- Q7.06: Have we reduced inequalities? (Provenance: AF)
- Q7.07: How did our patients rate their experience of our services? (Provenance: AF)
- Q7.08: Did we meet our targets and can we sustain them? (Provenance: HB)
- Q7.09: What are the benefits of the changes? (Provenance: WS290911)
- Q7.10: What is the impact of change on other services & stakeholders? (Provenance: V12)

2. What's really happening in this system?
Information available at right time and to the right person to protect the vulnerable and ensure the right care is given to reduce duplication and improve integration of care

- Q2.01: Why have we got financial pressures? (Provenance: AF)
- Q2.02: How long are patients waiting for treatment? (Provenance: AF)
- Q2.03: Is demand really going up? By how much? (Provenance: AF)
- Q2.04: What are the current flows and pathways and are patients using the right ones? (Provenance: WS290911)
- Q2.05: Where are the bottlenecks? (Provenance: AF)
- Q2.06: How much random variation in activity do we observe? (Provenance: AF)
- Q2.07: What is the demand today for urgent care, and who do I need to target to keep out of hospital? (Provenance: AF)
- Q2.09: What is the impact of patient choice on Provider volumes? (Provenance: CCG)
- Q2.10: To what degree are patients able to make informed decisions about their care? (Provenance: CCG)

6. How could things be better?
Developing new pathways and/ or decommissioning services to improve safety, quality, effectiveness of care and maximise financial benefit

- Q6.01: What would be the impact, in activity flows and costs, of making a proposed change to a clinical pathway? (Provenance: AF)
- Q6.02: What will be the combined impact, in cost and activity, of a whole set of service changes and productivity measures? (Provenance: AF)
- Q6.03: Would 'Scenario A' improve patient flows and productivity more than 'Scenario B'? (Provenance: AF)
- Q6.05: Do we need to procure services from alternative providers, or work in partnership with other stakeholders to be more efficient for provision and procurement? (Provenance: MT/HB/WS290911)
- Q6.06: How do we compare with evidence and guidance for process, outcomes and patient experience? (Provenance: HB)
- Q6.07: What are our drivers for change and have we engaged with stakeholders (inc Patients) (Provenance: WS270911)

3. How Much?
Improved financial information (including budgeting and planning) to ensure resource is given to appropriate care provider for the treatment given and ultimately there is better transparency of financial flows to support improved commissioning decisions

- Q3.01: How much is my budget? How much am I spending compared to plan? (Provenance: AF/WS290911)
- Q3.02: How much do individual service- lines/ pathways cost compared to budget? (Provenance: AF)
- Q3.03: Is cost aligned to volume, quality and outcome? (Provenance: AF)
- Q3.04: Are we maximising value for money? (e.g. community provision vs. acute care) (Provenance: V13)
- Q3.06: Is activity being priced at the correct amount? (Provenance: AF)
- Q3.07: Where are the most severe cost pressures? (Provenance: AF)
- Q3.08: What is the projected liability for our referred population? (Provenance: WS021211)
- Q3.09: How much are we spending on inequalities? (Provenance: AF)

5. Are my providers delivering what they agreed?
Improve commissioning decisions through better information and information analysis

- Q5.01: What is the current performance against plan? (Provenance: AF)
- Q5.02: What elements of the billed activity can we challenge? (Provenance: AF)
- Q5.03: Are providers delivering on service-improvement, quality (cquins) patient experience and waiting-times targets? (Provenance: AF/WS290911)
- Q5.04: What service lines are above or below plan - why? (Provenance: V13)
- Q5.05: Are providers overlooking agreements on Threshold Management? (Provenance: V13)
- Q5.06: Can we distinguish between Provider 'pull' and Primary Care 'Push'? (Provenance: CCG)
- Q5.07: Are Providers sending datasets to agreed standards and frequency? (If not, are there sanctions in place?) (Provenance: AF)
- Q5.08: Do our provider contracts reflect patient requirements? (Provenance: V12)

4. How do we Compare?
Challenge our current state through proactive benchmarking and comparison in order to improve clinical outcomes

- Q4.01: Where is there clinical / activity / cost / outcome variation vs local, national, international, best practice? (Provenance: WS290911)
- Q4.02: Are we delivering national standards of care for: patient experience, quality and outcomes? (Provenance: AF/WS290911)
- Q4.04: Do current pathways reflect evidence-based good practice? (Provenance: AF)
- Q4.05: How do we compare for value for money, outcomes and productivity against similar areas/ best practice over time? (Provenance: AF/WS290911)

Overarching Concepts
- OO.01 Interpretation, contextualisation, exploitation and stakeholder communication
- OO.02 Data collected at patient level
- OO.03 Holistic Analyses - Full System view rather than isolated segments
- OO.04 Flexible tariffs
- OO.05 Master Data Administration (inc Common currencies & agreed standardisation techniques)
- OO.06 Timeliness and quality of data
- OO.07 Data definitions and standards
- OO.08 Interoperability
- OO.09 Knowledge Management
- OO.10 Integrated ways of working
- OO.11 Development of Metrics
- OO.12 Simplify presentation appropriate to audience

Draft for Discussion Only