Conclusion: Traditional approaches to developing healthcare leaders are no longer fit for purpose. Effective healthcare delivery is highly dependent on multidisciplinary teamwork drawing on the expertise of each discipline or team member and pooling this expertise to collectively diagnose and treat patients. Traditional hierarchical leadership models have done little to encourage accountability for collective team performance and as such, present obstacles to the development of safety cultures. Training designated leaders to do the job of leading does not guarantee the performance of the team as a whole. This study has demonstrated the potential for a team-based collective approach to developing the leadership capacity of the team as a whole, co-designing interventions that are fit for purpose and responsive to the performance challenges faced by teams in their everyday clinical practice. Such an approach supports collective accountability and enhances patient safety.

ISQUA17-2294
THE DEVELOPMENT OF A TARIFF MODEL: PAY FOR PERFORMANCE
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Objectives: The South Korean government is planning to establish a Pay for performance (P4P) system that will provide incentives through medical quality evaluation for individual medical institutions, and will gradually repeal physician surcharges, which is a non-covered service that has increased out-of-pocket cost from 2015 to 2017. The purpose of this research is to derive a tariff model that considers quality improvement and compensation for loss by medical institutions according to the repeal of physician surcharges and establishment of a P4P.

Methods: Health Insurance Review & Assessment Service (HIRA) developed a relative evaluation tariff model based on a medical quality score and allotted the tariff (i.e., admission fee, consultation fee) to medical institutions. Medical quality is scored under the sections of ‘Medical quality and patient safety’ (30 indices), which evaluates medical quality in terms of effectiveness and the safety of patients, ‘Medical publicity’(9 indices), which evaluates the medical public service for the vulnerable class and accessibility of essential medical service, ‘Health care delivery system’ (7 indices), which evaluates the responsibility performance of each institution and patients-centered care, ‘Training’ (8 indices), which evaluates the system to train professional doctors, and ‘R&D’ (5 indices), which evaluates the research achievement promotion of excellence and medical service development environment. Also, the model is derived reasonably based on a medical quality evaluation score of each medical institution by repeatedly simulating the ‘setting proper number of class’, ‘setting cut-off region between classes’, ‘tariff computation of each class’, and ‘profits and losses estimation before and after the policy for each institution’.

Results: Final tariff models for the sections on ‘Medical quality and patient safety’, ‘Medical publicity’, and the ‘Health care delivery system’ are classified into five classes (1st: within upper 20%, 2nd: within upper 30%, 3rd: within upper 50%, 4th: within upper 50%, 5th: below 50%, and disqualified: unsatisfying 50% of the evaluation indices in the section on ‘Medical quality and patient safety’) based on its total score, and the sections on ‘Training’ and ‘R&D’, in which the models are classified into three classes (1st: within upper 20%, 2nd: within upper 50%, 3rd: below 50%, and disqualified: no indices). As an exception, the tariff model is separately classified for a general hospital designated by a special hospital, which cannot be compared with other medical institutions due to their specialization.

Conclusion: The P4P system has the purpose to assimilate physician surcharges, which are non-covered services, and to lessen the amount of out-of-pocket cost while improving the medical quality of the institutions. The government expects a savings of 415.9 billion KRW through reducing the number of doctors that have physician surcharges. Also, P4P is a relative evaluation system that is hard to compare directly regarding overall medical quality improvement. In spite of that, the number of indices increased from 27 (1st) to 46 (2nd), which made the qualification procedure harder, and the number of qualified institutions increased by 3%, which indicates overall medical service quality that also increased for the sections on ‘Medical quality and patient safety’, ‘Medical publicity’, and the ‘Health care delivery system’. The government is also planning to reinforce the policy through continuous monitoring of the system.

ISQUA17-3024
IMPLEMENTATION OF A STANDARDIZED DELIRIUM MANAGEMENT PROGRAM TO PREVENT, DETECT AND TREAT DELIRIUM IN SURGICAL PATIENTS
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Objectives: Delirium is an acute and serious complication affecting up to 61% of older surgical patients. A practice development project (2011–2013) was initiated to improve prevention, recognition and treatment of delirium in orthopedic and traumatology patients. Using a Plan-Do-Check-Act approach, the project team developed and implemented stepwise a nurse-led delirium management program that includes clinical practice guidelines, specialized nursing education, inter-professional collaboration and an inter-professional delirium consultation service (DCS).

The objectives of this study were (1) to describe the delirium prevalence rate, (2) to compare delirious and non-delirious patients, (3) to evaluate the benefits of the implemented delirium management program based on selected outcomes i.e. delirium recognition and prevalence rates, nurses’ strain in caring for patients with delirium.

Methods: This observational study conducted in a Swiss university hospital used an evaluation design. The evaluation included 961 retrospective and prospective extracted data sets from patients...
(delirium assessment data, ICD-10 diagnosis, length of stay) who were hospitalized between January and July 2015 on four orthopaedic units, for at least one day and 59 nurse survey data collected with ‘The strain of care for Delirium Index’. Data were analyzed with descriptive methods.

**Results:** 198 (21%) of the 961 patients had at least one Delirium Observation Scale (DOS) Score ≥3 indicating a probable delirious state. Patients with a DOS score ≥3 were seen two times per week by the professional DCS, who are clinical nurse specialists with advanced knowledge in delirium. The DCS performed further assessments to verify the delirium diagnosis and recommend treatment.

Over the five months evaluation period the number of delirious patients were quite stable. A delirious state was more frequent in patients after a hip prosthesis, femur fracture -intramedullary nailing, acetabulum surgery, or spine decompression, stabilization surgery. The comparison of patients with and without a DOS score ≥3 shows patients with a delirious state were on average 16 years older, more frequently male and had one or more of the following comorbidities: cardiomyopathy, hypertension, chronic obstructive pulmonary disease, renal insufficiency, vascular and / or cerebrovascular disease, diabetes mellitus with and without organ failure, tumor without metastasis. Furthermore, compared to the non-delirious patients, delirious patients stayed twice as long in the hospital.

After the implementation of the delirium management, almost all of the 59 nurses included in the survey, felt highly supported by the DCS. Furthermore, the nurses felt less strained (85%) and more competent (95%) in dealing with delirious patients or patients at risk.

**Conclusion:** The implemented delirium management program has resulted in a systematic delirium screening, detection and treatment process, and a less strained and more competent management of delirious patients or patients at risk. The benefit of the implemented delirium management and its sustainability will be further evaluated in the upcoming months.

**ISQUA17-2156**

**CONTEMPORARY TECHNOLOGY FOR PATIENT-CENTRED INNOVATION – A MIXED METHOD EVALUATION IN SEXUAL HEALTH**

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**Objectives:** SH:24 (www.SH24.org.uk) is an award winning community interest company delivering state of the art, online diagnosis and treatment of sexually transmitted infections. It offers person-centered care to promote shared decisions through technology-enabled services. Developed using agile design and extensive user consultation it offers online information and ordering with tests and treatments by post. Users access the service via the website, telephone or text message with a ‘mix and match’ approach to service modality. The service links closely to local sexual health clinics.

Initially this was through referral of complex cases from online to clinics and later through signposting of simple cases from clinics to SH:24. We measured the impact of this innovation on user behaviour and service activity across the whole sexual health economy within two London Boroughs with the highest rates of sexual health need in the UK.

**Methods:** A mixed methods evaluation of the impact of online sexual health services on the whole sexual health economy including a 2000 participant randomised controlled trial of impact on access and descriptive analysis of routinely collected data from all sexual health providers to document shifts in activity across the whole sexual health economy.

**Results:** The introduction of online services to the sexual health economy changes patterns of use across the whole system. Online provision doubles uptake of testing for sexually transmitted infections (RR 1.87, 95% confidence interval 1.63 to 2.15, p < 0.0001) attracting those who have never previously used services (27% of online users). Early adopters are more likely to be of white ethnicity (71% online compared to 39% in clinic) and men who have sex with men (17% online compared to 13% in clinics) but online services increase access by the same proportion for all groups. 76% of users complete the online test process. In a system that has insufficient capacity to meet demand, online services increase total testing and infections diagnosed, adding to baseline system activity. Triage at clinics and re-direction online is required to shift activity to the online service. While the experience of those who make this transition remains positive this risks reducing access to testing among the 25% redirected online who fail to complete the testing process.

**Conclusion:** Online sexual health services increase access, attract new users and improve user experience. Online services rarely operate in isolation because of the limits to clinical services without face-to-face interaction. Their evaluation benefits from a whole systems approach that acknowledges their interaction with the facilities that they refer to or accept referrals from. In sexual health economies that re-direct users out of clinics towards online options total capacity is increased but choice is reduced. Further work is required to understand the interfaces between these modalities of care. Triage that predicts ability to switch service modality with targeted support could reduce barriers to access for those who do not transition effectively.


**ISQUA17-2404**

**THE OASI CARE BUNDLE – A QUALITY IMPROVEMENT PROJECT TO CHANGE PROVIDER BEHAVIOUR AND REDUCE PERINEAL TRAUMA IN CHILDBIRTH**

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**Objectives:** To tackle behaviours that may lead to perineal trauma in childbirth a multidisciplinary regional collaborative project, the Oasi Care Bundle, was implemented. Antenatal, intrapartum, and postnatal components were included in the bundle. The project aimed to deliver the bundle in 75% of births within 12 months. The primary outcomes were changes in provider behaviour and the incidence of perineal trauma.

**Methods:** A mixed methods approach was used: 1) Qualitative data was collected on the delivery of the bundle using observation, interviews, and questionnaires. 2) Descriptive data was collected on provider behaviour and perineal trauma across a 20-month period before intervention and 6 months after.

**Results:** The implementation of the bundle was associated with an increase in provider adherence to the bundle components. Provider adherence was highest for antenatal components and lowest for postnatal components. The incidence of perineal trauma decreased significantly following the implementation of the bundle. The reduction in perineal trauma was greatest among women with a history of previous perineal trauma. The reduction in perineal trauma was maintained over the 6-month post-intervention period.

**Conclusion:** The Oasi Care Bundle is an effective quality improvement project that can reduce perineal trauma in childbirth. The bundle is feasible and sustainable in a multidisciplinary setting. Further research is needed to evaluate the impact of the bundle on maternal and neonatal outcomes.